

THE LITERARY DIGEST

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TOPICS - OF - THE - DAY

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WHY THE TURK COMES BACK TO EUROPE

ONE GREAT AND CLEAR GAIN from the World War, in the opinion of a numerous host of observers, editorial and otherwise, in 1918, was what has been called the "thrusting forth of the Turk from Europe, where he has been like a dead hand upon all modern progress among the Christian peoples in his clutches, and where with a bloody hand he made the Balkans an area of continual war." And so to-day it seems a melancholy reversal to the American press that the Allied terms offered to Mustapha Kemal Pasha should allow the Turk to reenter Constantinople and Thrace. "To the everlasting shame of the Allies," begins a Boston *Herald* editorial, "the Turkish Army, under command of Mustapha Kemal Pasha, fresh from the Smyrna holocaust, will be permitted to take possession of eastern Thrace where a large non-Turkish population remains yet unexterminated." "The Allies," the same editorial ends, "are sowing the seed of atrocity on atrocity, and war after war throughout Eastern Europe." The settlement is denounced by the *Philadelphia Inquirer* as a "humiliating surrender of principles for which the Allies fought"; "the almost fawning document," the *Baltimore News* calls the note to Kemal; the *Chicago Daily News* laments that "once more the European nations have lost a great opportunity—the greatest perhaps in history—of ridding Europe of the fanatical Turk"; and the *Philadelphia Bulletin* despairingly cries out upon the "Allied folly" which has made fruitless the "heroic sacrifices of the Anzacs" at Gallipoli. Such phrases picked at random are sufficient to show where our papers stand; they might be duplicated by the score. It seems to the New York *Evening Post* that the Allied note gives Kemal "virtually everything he asks." It recalls that "when the Allied Ministers issued on March 27 last their Paris agreement for a Near Eastern peace, they made a genuine effort to fix upon just terms," but "in every change made from the Paris agreement of last March, the new offer is a step backward." A glance at the map on page 8 will make clearer the *Evening Post's* argument, which runs as follows:

"Turkey's principal gain is that the line in Thrace, instead of running from Ganos to the Bulgarian frontier in such wise as to leave Adrianople, Baba Eski, and Kirk Kilise in Greek hands, will follow the Maritza River and give these three towns, with the wide strip of Eastern Thrace containing them, back to Turkey. The ethnic character of Eastern Thrace is subject to dispute because of the intermixture of Greeks, Bulgars and Turks, and the displacement and destruction of population by the Balkan and World Wars. But there is no doubt whatever that the three towns named are predominantly Greek. For the region as a whole Director Isaiah Bowman of the American Geographical Society states that the population before 1912 numbered 400,000

Greeks, 250,000 Turks, and 50,000 Bulgars. Moreover, there can be no doubt that Greek government of mixed populations is preferable to government by Turkish Nationalists, while the Greeks have established an effective administration.

"Whereas the Paris agreement prescribed the demilitarization of explicitly defined areas of generous size on both sides of the Bosphorus, the new offer, in meekly vague terms, suggests demilitarization of 'certain zones to be fixed.' While the Paris agreement provided for continuance of the capitulatory régime protecting foreign economic interests, the new offer nowhere mentions capitulations. The Paris agreement refused to allow the Turks to introduce conscription in Europe; the new offer leaves that to the forthcoming conference. Detailed proposals were included with the Paris agreement for 'the full and adequate security' of minorities, but there is only a general provision in the Allied note.

"In short, the document makes a series of concessions that six months ago would have been held intolerable. What the Little Entente will think of the grant of a long common boundary to Turkey and Bulgaria, we can easily imagine. What a legacy of bitterness the settlement will leave in Greece is equally evident. Great Britain can hardly be blamed for refusing to fight single-handed for a better Thracian settlement, since the freedom of the Straits is secured; but France and Italy are to blame for not supporting England firmly on the terms the three so recently promulgated.

"The one bright element in the settlement is the invocation of the League. Internallied control has lamentably broken down, and would break down again if reestablished. With British shipping in the Mediterranean nearly twice as great as French and Italian shipping combined, with the British Navy easily first, the British influence at the Dardanelles has become so predominant that France would rather see Turkey powerful again than let it continue. But the issues of Near Eastern war and peace should not be subject to such international rivalries, and the League can remove the control of the Straits to a sphere where it will no longer worry chancelleries—the same sphere as Danzig, now under League control."

Yet it is not to be supposed that our editors can find nothing good to say about the Allied agreement which leaves Asia Minor, Constantinople and eastern Thrace to the Maritza in Turkish Nationalist hands, and finally tears up the Treaty of Sèvres. By this solution, as the *Washington Star* notes, "England withdraws from her isolated position, and the solidarity of the Entente is preserved." Two features in the Allied terms to Kemal seem to the New York *Times* to be of marked significance:

"One is the mere fact that their governments are to-day in full agreement. By whatever concessions or adjustments, the Near East policy of the British is at last the same as that of France, and Italy identifies herself with both. This witnesses, first of all, to the intense desire of all of them to avoid another war. It was the common danger of this which induced them, in the end, to act in common. And the Turks will do well to note

that this joint action to secure peace implies measures in unison to resist hostilities, if they should rashly be begun by Kemal.

"The other striking thing is the purpose to place the control of the Dardanelles, so that navigation may be free to all in both peace and war, in the hands of the League of Nations. Somehow, to that organization all roads lead. There it stands ready, a piece of political machinery devised for such emergencies as the present. What more natural than to seek to make use of it? The Turks fortified on the Dardanelles could not be trusted.

proval to the terms offered by the Allies to the Turks ought to cause certain eyes to cease to roll in a fine frenzy."

When we turn from contemplating the situation as it appears to calm or indignant editorial minds, to note what these editors consider responsible for the existence of that situation, we find papers like the *Manchester Union*, *Des Moines Register*, *Philadelphia North American*, and *Buffalo News* agreeing that Allied jealousies and conflicting national aims

are responsible for the fact that the Turk comes back to Europe unpunished and with an invitation to join the League of Nations. The deep-lying cause, as the *New York Evening Mail* explains, "is the persistence among European statesmen of the psychology which produced the Great War":

"That psychology is a compound of ambition and fear. The struggle that lay behind the Great War was the struggle between German and British imperialism as to who would dominate Europe. The struggle for domination to-day is between Britain and France. In that struggle the petty peoples of the Balkans are only pawns. The next phase of it will be a battle of diplomacy for Russia's friendship."

Another explanation offered by several newspapers is that the people of Europe are in no mood to go to war. As the *Cincinnati Times-Star* points out, "while Lloyd George had a pretty good case in the Dardanelles," his people did not want to fight. "And if Lloyd George has a Gladstonian dislike for the Turks, he also has a keen understanding of the psychology of the British voters. So England joined France and

Italy in a policy of concession. Hugh Walpole, the British novelist, on landing in New York recently, told *The Times* interviewer that he thought it would be extremely difficult to get the average man in England to "fight again about anything."

Then, as the *Philadelphia Public Ledger* points out, England had also to keep in mind "the signals of danger multiplying in India and Egypt, and the anger and unrest of the Moslem world." So the *Providence News* sums it up this way: "The Turks will come back, just as brutal as ever, representing the most militant 20,000,000 of people on earth, and come back because British power does not want to fight the religious hordes that extend from the Aegean Sea to far-off India, and even into China, Japan and South Africa."

Then there are writers who can not help recalling that the Turkey with which the Allied Powers have to deal is a far different Turkey from the one which the Treaty of Sèvres envisaged. The Turkish people have proved, writes William L. McPherson in the *New York Tribune*, that "they are still fighters and stayers, fired by an unquenchable patriotism." They have just won "a triumph on the battle-field, recalling the great days of Turkish history." Have they not a right, asks Mr. McPherson, to demand "reinstatement in European respect and a reversal in large part of the humiliating sentence meted out to her in the Peace Conference," particularly when practically everything that Kemal asks has been agreed to in previous interallied



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THE BEAUTY THAT WAS SMYRNA.

This great city, with its docks and shipping, its warehouses full of the wealth of the Levant, was almost completely destroyed by fire shortly after the Turkish occupation last month. To the horrors of the fire were added those of murder and savage plundering. While the precise responsibility as between Greeks and Turks is in dispute, the fact remains that scores of thousands of the Christian people of Smyrna are homeless, destitute, and starving, and dependent for life itself upon charity.

England in charge there would be open to endless suspicions and jealousies. Only the League can be counted upon to display the high impartiality and devotion to the general interest which are needed."

It seems to *The Times* that we ought not to be too furious because the Turk is not to "be turned out of Europe bag and baggage":

"We are seeing events in the Near East less under the guise of an end-of-the-world struggle between the powers of darkness, and more as a sequence of the World War which has to be dealt with in the most practical fashion now feasible. France and Italy and England are agreeing on a policy not of a sort to shape and dominate the world fifty years from now, but to surmount their immediate and pressing difficulties. The statesmen concerned are not supermen, but simply embarrassed rulers doing the best they can to avert war and to arrange a tolerable settlement. Even the Turks are ceasing to appear wholly as monsters of iniquity, and are seen to be like mortal men of other races near them, desirous of retaining their ancient capital and securing room for national existence. With patience and fairness and firmness on the part of the Allies, it ought to be possible to arrange a settlement in the Near East which will assure ample protection for all foreign interests in Turkey, as well as for the minority populations, thus turning aside the present menace of war and leaving it to time and the penetration of modern ideas either to make the Ottoman Power more fit to continue or else to be got rid of finally.

"The fact that Secretary Hughes now gives his official ap-

settlements revising the Sèvres Treaty? But, after all, says Mr. McPherson in conclusion, the Turk is returning to Europe, not because of anything that has been said or done by European diplomats but "because the zealotry of the Asian and African Moslem world makes it a political necessity for Great Britain and France to allow him to return." While the Springfield Republican agrees with many of its contemporaries that no Turkish Government should be allowed in Europe and that the "squalid rivalry" of the Allied Powers must be held responsible, it can not help observing that:

"All the calculations of the Allies were based on the assumption that Turkey was hopelessly decadent, and that they had only to decide how to divide the spoils. They now recognize that they have to deal with a patriotic renaissance which has already developed surprising strength. Even if the Powers could afford a new war it would involve great and far-reaching danger and might spread incalculably. Peace is essential, but it is possible only through frank recognition of the new Turkey that is arising out of the moribund empire of the Sultan.

"If the progressive spirit shown by Kemal and his associates can be turned to pacific ends it would be the best of all solutions. In the protection of minorities the Allies have failed dismally, and no very hopeful scheme for the future is suggested. If there is a chance for the growth of a civilized and humane government in Turkey it ought in every way to be encouraged; as 'the Sick Man of Europe' Turkey has long been a pest and a menace. It is at any rate highly desirable that the Nationalists have a chance to show what they can do under the conditions of peace. But it is a pity that a Turkish government of any sort should be reestablished in Europe."

And at least one Englishman who knows Turkey, Major-General Sir Charles Townshend, hero of a hundred fights against Islam, in Egypt, India and Arabia, has from the first insisted that the Allies have no business in Constantinople, and that the only sensible thing to do is to restore it to the Turk. As the General is quoted in a Paris dispatch to the *New York Evening Post*—

"We've got to get out of Constantinople, get out, get out.

"We have either got to get out or make up our minds to accept a long period of actual warfare and of an increase of unrest and upheaval in every country inhabited by Moslems.

"If we are foolish enough not to recognize the facts of the situation, we will have the whole Mohammedan world rushing to the green banner, and a holy war of such magnitude is a contingency which neither Great Britain, nor even France, the two great Mohammedan Powers of the world, can contemplate with anything but dismay.

"Constantinople and Adrianople are Turkish by right. It would be folly to give them the whole of Thrace, and I believe that with reasonable negotiations Kemal will easily accept the old frontier of Adrianople and the Maritza."

In connection with General Townshend's conclusions, it is interesting to note that *The Wall Street Journal* does not consider Great Britain to be influenced by fear of the Turk or to have been outwitted diplomatically. This Metropolitan daily is convinced that "British diplomacy looks further ahead than that of most other countries."

An authoritative explanation of British policy appears in a statement made by Prime Minister Lloyd George to the press. British forces in the Dardanelles, were strengthened simply for two purposes: "First, that of securing the freedom of the Straits, and second, that of preventing this prairie fire which devastated Asia from crossing the narrow seas and lighting the dry timber in the Balkans." A British military authority is quoted by the British Premier as saying that the evacuation of Ismid or Chanak immediately after the Turkish occupation of Smyrna might have had a sequence which would have made "the fire of Smyrna pale." The British, according to their Prime Minister, "are not putting up any fight about the sovereignty of Eastern Thrace, but peace must first of all be stabilized and its conditions must be known." Circumstances compel the revision of the terms of the Treaty of Sèvres, but, insists Mr. Lloyd George,

"Freedom of the Straits remains. That is of vital interest to us as a maritime and commercial Power and to civilization throughout the world. That we can maintain, and the fight that we are putting up at the present moment is the fight to insure that whatever happens at the peace conference we shall not abandon the policy of securing the freedom of the Straits. . .

"I want to make it quite clear that we do not want a second Gibraltar in the Dardanelles. We want the League of Nations to keep the Straits open for all nations."

There is a tendency to see in the generous terms offered by the Allies to Kemal, a distinct diplomatic victory for France,



A PICTURE OF THE FUTURE.

"The last men have slain each other. Now we have to start from the beginning again."

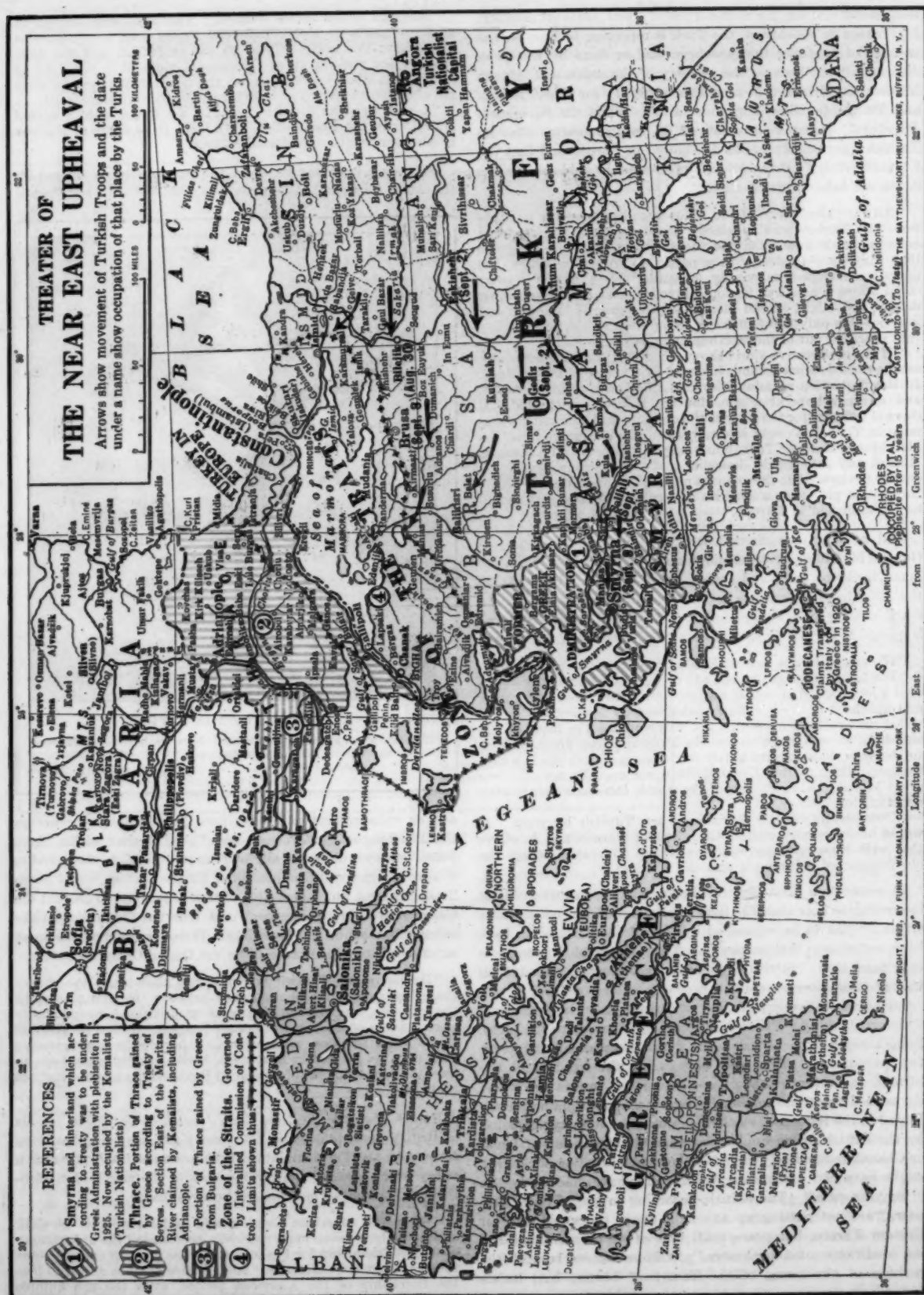
—Simplicissimus (Munich):

and an enhancement of French prestige. Diplomats, observes the *Pittsburgh Gazette Times*, now "predict that within three years Turkey will be the ally of France. Further, they predict France will gain political control of Europe—which would be no limited control, but comparable to that hegemony, to prevent the Germans securing which the World War was fought." On the other other hand, the *New York Times* considers "the most expensive luxury in France to be the Quai d'Orsay"—

"By its recent Turkish policy it has abandoned the theory that there was a moral difference between the two parties in the late war, and that massacres of unresisting noncombatants were a token of a lower state of civilization. It has proclaimed that former enemies, no matter how hopelessly unprogressive they may be, no matter how stained with cruelty, may hope to have the support of one of the Allied Powers, if its interest inclines that way."

France, observes the *New York Journal of Commerce*, jealous of British predominance in the Near East, has been "currying favor with the Turkish Nationalist movement" and pursuing a policy which means "the turning back of the march of civilization." *The Journal of Commerce* believes that:

"When the American people really understand this we shall undoubtedly see even more markedly accelerated the unfortunate cooling of friendship for France, which has been so evident since the Washington Conference. And France can not afford to lose the friendship of the American people, even tho she humble her commercial rival in the process."



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Longitude

East

from

Greenwich

Occupied by Italy
Gulf of Adalia

Adana

Adalia

Adalia

Adalia

Adalia

THE RISE OF KEMAL AND HIS TURKS

THE ANCIENT CRY OF FEAR before the invasion of Europe by the infidel Turk rings anew through Christendom. Congregations and assemblies send up their prayers for protection against this hereditary terror, and money and supplies are collected for the imperiled Christian minorities in the Near East, where the flight of the Greeks in the "most disastrous defeat in history" demolished the barrier lately built to keep the Turk out of Europe. On the other hand, all over the Mohammedan world also, money and supplies are gathered by the followers of Mohammed and prayers are uttered to Allah that he keep victory advancing under the standard of the Crescent. The Mohammedan is devout as is the Christian, and loyal to the cause whose triumph adds a new chapter to the age-long conflict pivoting on the Straits of the Dardanelles and the city of Constantinople, where, to adapt a sentence of Lord Morley's, "religion and race, the two incendiary forces of history, shoot jets of flame from their undying embers."

THE TURK'S FIRST Foothold IN EUROPE

When Mohammed II took Constantinople in 1453 and established the Turks in Europe, we are told that he began the era of modern history as contrasted to that of ancient times and of the Middle Ages. When the Turk was read out of Europe by the Treaty of Sèvres, it is pointed out, this fact coincided with the end of an era, involving the collapse of the three proud dynasties of Romanoff, Hapsburg and Hohenzollern, and with the creation of a new set of States in Europe. Nearly five centuries ago the Turk swung himself across the narrow waters of the Bosphorus, writes James Gustavus Whiteley in the *Baltimore Evening Sun*, and captured Constantinople, the "imperial city, which had stood for a thousand years as the capital and stronghold of the Eastern Christian Empire." Up to 150 years ago the Grand Turk held all of Greece and the Balkans as well as the southern part of what is now Russia, this writer reminds us, and all efforts to get the Turk out of Europe had been futile. But he goes on to say—

"About the end of the eighteenth century Russia put the skids under him, and since that time he has been gradually slid down toward the door which opens on Asia Minor. It seemed that his days were numbered and he became known as the 'Sick Man of Europe.' But he was kept alive by the great Powers, who could not agree as to which of them should inherit Constantinople and the guardianship of the Straits of the Dardanelles and of the Bosphorus. Napoleon had said in his time, 'The possession of Constantinople means the empire of the world.' Perhaps it does not mean quite all that, but the Little Corporal had a good eye for strategical positions, and the World War has proved the importance of the control of the Dardanelles."

"Ever since the days of Catherine the Great, Russia has wanted to possess Constantinople. The Straits constitute her only passageway from the Black Sea into the Mediterranean. It has been extremely annoying to her to have the key to her southern doorway in the hands of a foreign Power. On the other hand, it has been the traditional policy of England to keep Russia bottled up. A Russian fleet issuing from the Dardanelles could menace England's route to India and endanger the Indian Empire itself. Consequently, British diplomacy endeavored to keep the 'Sick Man' alive (but not too strong) and to maintain him at Constantinople as janitor of Russia's southern exit."

"To keep the Turkish corpse alive, or at least standing, is," said Guizot, "a traditional folly of the English nation." However, England persisted in her 'traditional folly,' and by various treaties, to which the principal Powers of Europe were parties, the Sultan was retained at Constantinople as guardian of the Straits and was bound 'to prohibit all foreign ships of war from entering the Bosphorus or the Dardanelles as long as the Porte is at peace.'"

What Guizot called England's "traditional folly" seemed to work to her advantage for many years. Mr. Whiteley notes, yet calls attention to the fact that "one point had been overlooked." It had never been contemplated that the "Sick Man,"

whom England had "raised from the dead," would consort with evil companions, or that he "would have had the bad manners to lock the gate of the Black Sea in the face of his preserver." But just this happened when the Sultan cast his lot with the Kaiser, "resulting in the tragedy of Gallipoli and the prolongation of the World War," writes this informant, who proceeds:

"Then England repented her 'traditional folly,' and Lloyd George declared, amid much applause in the House of Commons, that the Turk must be driven out of Europe. By the Treaty of Sèvres it was proposed that a strip of territory on each side of the Straits, including Constantinople, should be a sort of neutral zone administered by the League of Nations through an international commission; that the remains of European Turkey (Thrace) should be given to Greece, and that the Turks, who, under the leadership of Mustapha Kemal, were still fighting in Asia Minor, should be driven back into the hills of Anatolia. The Treaty of Sèvres has never been ratified. The Nationalist Turks under Kemal kept on fighting and kept on objecting. Last spring the Allies offered the Turks considerable concessions, including a part of Thrace, if they would quit fighting and be good, but the proposition did not suit Mustapha Kemal."

"To-day the situation is worse. Kemal has chased the Greeks out of Asia Minor and is demanding the restoration of Constantinople and all of Thrace, and a lot of other things besides. It is a man-sized proposition for the Allies to handle, and the situation is specially awkward on account of the fact that England has been backing Greece while France is disposed to be friendly with the Turks, who are neighbors to her Syrian mandate."

"In the meantime the Moslem world has been getting restive, and it would seem that something will have to be done to satisfy the Turks and to quiet Islam. But what? Whatever concessions are made, it hardly seems possible that the Allies will consent to return the Straits to Turkish control. The guardianship of the Straits—which Disraeli described as 'one of the highest functions of public duty'—is too important a job to be confided to any one Power, for this waterway is the only outlet to the sea for Southern Russia, Roumania, Bulgaria, Armenia and Georgia, as well as for Hungary and Czechoslovakia via the Danube."

THE TURKISH NATIONALIST LEADER

The chief personage in the drama of bloodshed and diplomacy by which the Turks are led again to the threshold of Europe, we are told, is Mustapha Kemal Pasha, leader of the Nationalist Turks, who has achieved eminence not only as a military strategist but as a statesman also. Whether his statesmanship is as profound as his military mind, it seems, must be shown by events to come. Meanwhile a British military authority, Major-General Sir Charles Townshend, contributes to the *London Times* the following portrait of the new Grand Turk:

"Piercing blue eyes, fair hair, a diminutive close-cropped mustache—these are the salient features of Kemal Pasha, the force behind the Turkish push, that impressed me when I met him face to face at Konia only a month ago. He is a man of middle height, and he wore, at the time of our meeting, plain clothes—the knickerbocker breeches were well cut and rather in the English style—sporting stockings, and on his head the universal 'Kalpak' of astrakhan, in a larger size than usual. The distinctive and useful feature of this 'Kalpak' is that it may be worn with either uniform or plain clothes. In appearance it closely resembles the fur caps of the Russians and the Persians."

General Townshend goes on to say that as far as he had been able to judge, Kemal "is adored by the Army and the populace, and it is in vain that propaganda agents strive to represent that there are divisions in the Kemalists ranks." In Constantinople, it is averred, actually ninety per cent. of the Turks are for Kemal, and the Turks in Anatolia "support him to a man." We read then:

"His orders are obeyed implicitly, his rule is an iron one beneath the velvet glove, and under him the Government of Nationalist Turkey works smoothly and well. His will is law."

"Kemal Pasha speaks little unless it is on a subject which vitally interests him; then he is eloquent. For example, one

night when dining with me we discuss for a long time Napoleon's campaign of Austerlitz in 1805. This campaign provides one of the very few examples where Napoleon attacked the enemy's center; his usual method was to hold his adversary in front with a minimum part of his force, whilst he delivered his principal effort against one of the enemy's flanks.

"When I went in to dinner I certainly had no idea that I was going to have a discussion on Napoleon's strategy and higher tactics. We both agreed that Napoleon's doctrine is as valuable to-day as it was one hundred years ago, and I discovered that Kemal is an enthusiastic admirer of Napoleon's campaign in Italy in 1799. I mention this in order to show that Kemal is a close student of military history—as every soldier who aspires to military warfare must be.

"Laborious and indefatigable to the point of excess, Kemal is always at work, and possesses a wonderful grasp of European politics and affairs. This is all the more remarkable as his education was purely a military one received at the Ecole de Guerre in Constantinople. He was in the Tripoli campaign, and later served in several theaters of the war; his best service was in the defense of Gallipoli, and it was for this service that Liman von Sanders had him promoted to the command of an army. He was afterwards on the tottering front of Palestine, where the Turks in the final stages were hopelessly outnumbered.

"Kemal was Inspector-General of the Turkish Army in Asia Minor after the Armistice in 1918, and his patriotism came into prominence after the occupation of Constantinople by the Allies, when the Nationalists ran to arms.

"Kemal is a patriot; he is out for liberty and independence—Turkey for the Turks—and he desires peace, but an honorable peace. His terms are the immediate evacuation of Asia Minor by the Greeks. He says: 'How can I trust assurances that the Greeks will evacuate after four months, as was said in the Paris Conference last March, when, in the middle of the London Conference last year, during an armistice, the Greeks suddenly launched their offensive!'

"Will you try to persuade us that the British Government did not know of that offensive being prepared?' he remarked to me. 'If you can convince me of that, then can you persuade me that the British Government could not have stopt that offensive by raising a finger?'"

WHO THE TURKISH NATIONALISTS ARE

Authentic information about the genesis and aims of the Turkish Nationalists is found in a Turkish bi-monthly, *Birlik* (New York), whose editor tells us that when the armistice with the Turks was concluded at the end of the World War the British and their allies "immediately forgot their pledges and there followed the Allied invasion of the Gallipoli peninsula and Constantinople." A certain number of "self-respecting and more virile Turks," he relates, escaped to Anatolia, and there organized the Grand National Assembly of Angora. The Assembly prepared a declaration of Turkish rights which is known as the National Pact, and as defined by this informant, means—

"1. Abandoning claims to territories inhabited by Arab majorities, but considering the rest of Turkey as a political, racial and religious unit.

"2. Leaving the status of Western Thrace to be decided by its own inhabitants, but not accepting any compromise for Eastern Thrace.

"3. Acceptance and support of the rights of minorities in accordance with the principles decided upon by the Powers in regard to the minorities in the case of newly created States.

"4. Unconditional restoration of Constantinople and the Straits, giving due respect to the rights of the interested Powers in the freedom of the Straits for commerce and communication.

"5. Recognition of the political, economic and judicial independence of Turkey.

"The National Pact also provides for the complete autonomy of the erstwhile Turkish subjects in the non-Turkish territories."

In pursuance of its objects, this Turkish editor says further, the Grand National Assembly "decreed resistance to the occupation of Asia Minor by the Greeks, and their advance toward Anatolia." He adds that "this started the Greco-Turkish war, in which the Greeks received every kind of support from England, whose imperialistic aims required the prostration of

Turkey, which would facilitate the annexation of the latter's possessions—Palestine, Mesopotamia and Constantinople." We read then:

"In 1920 the Allied Powers concluded among themselves an agreement, now known as the Treaty of Sèvres, which was the culmination of the work of the spoliation of Turkey. This treaty was not accepted by the Angora Turks and has up to this day remained unratified by the Turks as well as the Allies themselves, the Kemalists continuing the struggle for the freedom of Turkey.

"In the years of 1920 and 1921 several conferences took place between the Turks, the Greeks and the Allies, but no substantial change in the Treaty of Sèvres could be secured from the Allies. The Angora Government, however, succeeded in concluding several separate treaties with different Powers in Europe and Asia—Soviet Russia, France, Italy, Persia, Afghanistan, Ukraine and Caucasian Republics, most of these recognizing definitely the right of the Turk to the provision of The National Pact."

This Turkish spokesman proceeds to point out that these treaties were concluded "between the various Powers and the Grand National Assembly at Angora, and not with the Government of the Sultan at Constantinople." He tells us that the Sultan had been "forced by the Allies to declare the Kemalists as traitors to Turkey," and—

"The Angora Assembly finding the Sultan and his Government prisoners in the hands of the British and virtually their puppets, declared themselves to be free from all obligations to the Sultan, claiming at the same time that the Angora Government was the real Government of Turkey and the only one entitled to speak in the name of the Turks. This claim of the Kemalists, altho denied by the Sultan's Government, received the whole-hearted support of the Constantinople Turks, who increasingly began to look to Kemal as their emancipator. To-day the entire Turkish population, not excluding the Sultan himself, heartily supports Kemal and recognizes his Government as the sole Government of Turkey."

THE MOHAMMEDAN WORLD AND ANGORA

Through all these years of war between Turkey and her enemies, we read further, the Mohammedan world has been watching with extreme concern and grave anxiety the heroic struggle of the Angora Nationalists against Greek aggression and British encroachment on Turkish lands, and it is declared that—

"Hundreds of millions of the followers of Islam, to whom Turkey has been the symbol of Islamic glory and the seat of the Caliphate, and as such, the defender of the Moslem faith and its holy shrines, have looked upon their activities as a struggle for the maintenance of the prestige of Islam. In India, Persia, Mesopotamia, Afghanistan, Arabia, Egypt, Tripoli, Morocco, in short everywhere where the worshipers of Allah inhabit the land, hearts beat in unison with the defenders of Anatolia and Constantinople. They regard the Government of Angora to be the real Caliphate and its head the real Caliph.

"The Moslems from all these countries have been subscribing millions of dollars to the Angora Assembly and sending hundreds of their young men to fight along with the Nationalists against the callous endeavors of their enemies to demolish this last stronghold of Islam. Every triumph the Kemalists have scored since their drive against the Greeks has gladdened the hearts of the Moslems the world over; and hopes are revived that despite all the resources of the British Empire and its allies, the Turks shall not be wiped off the map of Europe as easily as John Bull's imperialism would desire."

Of striking illumination on the relations between the Nationalist Turks and the Soviet Russian Government is the remark of Karl Radek, made in the Moscow *Isvestia* just before the beginning of the Greek defeat. He said:

"Turkey can find no salvation outside of a close alliance with the proletarian revolution. This, of course, does not prevent her from concluding peace with the Western Imperialists, should an occasion present itself. But the Turkish people must remember that it is only through cooperation with Russia that they can achieve their national aims."



PROFITEER: "IT'S ALMOST AS GOOD AS A WAR!"

—Fitzpatrick in the *St. Louis Post-Dispatch*.

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CARRYING IT HOME.

—Enright in the *New York World*.

AS DEMOCRATS VIEW THE NEW TARIFF.

A TARIFF THAT WILL STRETCH

INSTEAD OF BEING SETTLED, the tariff schedules, after twenty months of discussion, are rendered uncertain by the very act of the President's signature. Instead of permanent tariff rates, we have "elastic provisions" in the new law which will permit President Harding, if he so desires, to revise tariff rates, without reference to Congress, upon the recommendation of the Federal Tariff Commission. Whether these provisions constitute a danger to consumers, or whether they will be used to safeguard the American buying public is the question that is now a matter of sharp controversy in the press.

Not only do these new "elastic provisions" of the tariff law vest the Chief Executive with the power of changing tariff rates either upward or downward to suit varying economic conditions, but he receives from Congress authority to substitute American valuation for foreign valuation, provided he does not thus bring about an increase in tariffs which will more than cover the difference of production costs at home and abroad. These "elastic provisions" are of vital interest to the taxpayers of the country, contend Democratic Senators, for under them the President, "if he so desires, can more than double the effectiveness of the tax on the American people." The Democratic *New York Times*, however, observes that "the country's protests against the excessively high rates are basis for belief that the President will reduce some of them. But which ones? And how much?"

Both the independent *Washington Star* and William Allen White, editor of the Republican *Emporia Gazette* agree that the "flexibility" feature of the tariff law is a step in the right direction, and that it represents a "distinct personal triumph for Mr. Harding," as the *Star* puts it. It means, moreover, that "the Government is centralized just that more in the President," writes Mr. White in the Republican *New York Tribune*, which strongly disapproves editorially of these elastic provisions. "But," notes this experienced political observer, "it enables Congress to wash its hands—and they are dirty enough—of the whole miserable mess." In *The Tribune's* opinion—

"The President's new job is not an enviable one. The pas-

sage of the Bonus Bill was an obvious effort by Congress to evade blame and shift responsibility to Mr. Harding's shoulders, but the passage of the Tariff Bill is an effort to shift a far greater responsibility to the White House. Congress, in short, makes a hopeless confusion of its tariff tinkering and then puts it up to the President to save the country and the Republican party from the consequences of its blundering. . . .

"Stable rates are absolutely essential both to the importer who wishes to buy goods abroad and to American manufacturers who wish to make goods here. Large investments of capital are involved. Contracts must be made calling for delivery over many months. If rates are to be constantly raised or lowered there is certainty for no one. Neither foreigner nor American has a proper basis upon which to do business, and the consumer inevitably suffers. Such confusion yields neither trade nor protection. . . .

"The country has had experience with Mr. Harding's high motives and will to do right, and it trusts him as it does not trust Congress. It knows that he would not abuse any powers intrusted to him. But a matter so vitally affecting the prosperity of the country should not be left dependent upon the chance of one personality."

Moreover, points out *The Tribune* in another editorial, "these elastic provisions are likely to upset business, and they are sure to subject Mr. Harding to that exhaustive political pressure which is usually brought to bear on the Senate Finance Committee and the House Ways and Means Committee."

The Democratic *Louisville Courier-Journal*, however, is more concerned with that elastic provision which says, in effect, that when the President declares the American valuation basis "he shall not further raise the duties levied on it." As *The Courier-Journal* explains:

"The bill invests the President with the power to raise or lower duties not more than 50 per cent. But when he substitutes American valuation for foreign valuation, as he is authorized to do by Congress in transferring to him its own powers, he automatically raises duties, in many instances far more than 50 per cent. For not only does the American plan prescribe a higher basis for assessing duties, but it is a basis which is usually built upon a duty on a duty, and often on a pyramid of duties."

"But it can be taken for granted that no President will abuse the privilege granted by Congress in this regard," thinks the *Buffalo Express* (Ind. Rep.). In fact, maintains the Republican

New York *Herald*, "this is one of the few good features of the Tariff Law; when excessive duties result in increasing the cost of living, the President can lower the rates." Continues *The Herald*:

"If it were not for this provision the public would have no road



of escape from greedy price-fixers willing to go the limit under tariff rates that have been made scandalously high. But with that provision in the law anybody can take a complaint of profiteering to the Tariff Commission and the President, and the rate can be adjusted forthwith. Moreover, when economic conditions are subject to extreme fluctuations, as they have been since the war, the very best tariff of to-day might become a very bad tariff to-morrow. There should be a quicker and an easier way to meet rapidly changing conditions than with the slow legislative procedure, and the flexible rate power of the Chief Executive is that way."

"Congress is necessarily slow to take action in schedule revision," we are reminded by the independent Republican *Indianapolis Star*, while the independent *Detroit Free Press* goes on to point out the benefits which should accrue from the recent action of Congress:

"One very important reason which moved Congress to adopt this plan was the unsettled conditions in nearly all of the great centers where the United States buys and sells. Any fixt tariff would soon be out of line with the markets it was intended to affect; and the flexible tariff is the answer which Congress has given to this problem. But there were many members of Congress who wished to lodge greater power in the Tariff Commission because they believed they saw a way through the Commission to neutralize the effects of the log-rolling which is so large a factor in the making of every tariff bill. They hope that the new plan will result finally in a tariff based upon economic fact and not upon the exchange of favors among local interests.

"If the country should decide before the next presidential election that this hope has been fulfilled, the prospect that executive discretion will continue to play a large part in all future tariff-making will be bright. Under such a system the country might escape the disturbances due to repeated general revisions of the tariff such as it has been obliged to endure for many years; and at the same time a great deal of unwholesome political influence arising from the financial interest which industry has in every national election would disappear."

THE FARMER AND "HIS" NEW TARIFF

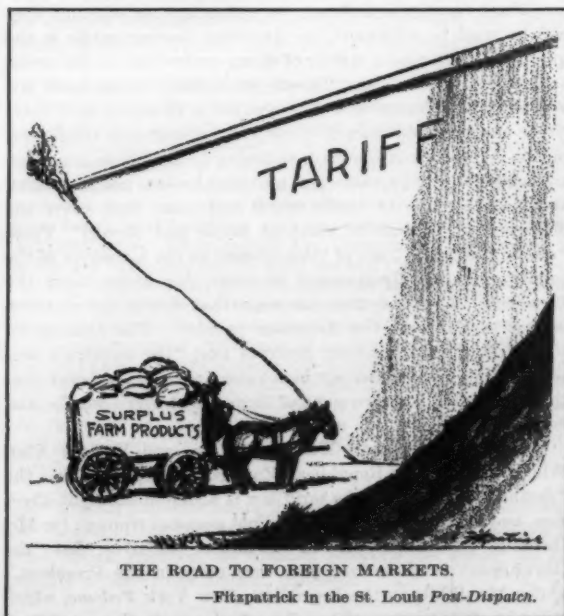
"FOR A MESS OF TARIFF POTTAGE of dubious value the farmer is practically selling his birthright," is the way the *Kansas City Star*, one of the most influential spokesmen of the Progressive Republicans of the farming section of the Middle-West, now views the agricultural provisions of the new tariff law. But the *Des Moines Capital*, another Republican journal in a great farming State, maintains that "all persons interested in the farmers of this country will be pleased with the arrangement for their protection from the cheap land and cheap labor of other countries." Here, then, is a division of opinion over the real good the farmers will derive from tariff schedules enacted for them and insisted upon by the "farm bloc" in Congress. And the same division appears in the ranks of the farm weeklies. The approval given by several agricultural editors is based on the hypothesis that under a protective tariff the manufacturers of the country have prospered and a similar prosperity should result from the protection of farm products. "The judgment of most farmers," *The Ohio Farmer* (Cleveland) claims, "calls for protection of farm products on a basis parallel with the protection given manufactured articles," and *The Kansas Farmer* (Topeka) holds that this demand has been met in the present bill:

"This is the first time agriculture has ever had a square deal in a tariff bill. In shaping the bill the Finance Committee of the Senate had a big job on its hands, but did its work well."

"The McCumber-Fordney bill is the fairest measure that has ever been presented to the country in a generation," says the *Spokane Spokesman-Review* (Rep.) from the Far West:

"It does not discriminate against one section or another; it is as fair to the South as to the North, to the West as to the East. The Underwood law was a gross discrimination against the agricultural interests of the nation."

Discussions of the "effectiveness of the bill for the farmer" have centered around the wool and wheat schedules. Answering



the charge that "wool growers get but little while the public loses much," *The Kansas Farmer* contends:

"In reply to the charge that the duty asked on wool will add \$4 to a suit of men's clothing the Farm Bureau replies that it

requires 9.8 pounds of grease wool to manufacture cloth for an all-wool suit of clothes, and that the total cost of this wool at the average price received for wool last year of 20 cents a pound would come to \$1.96, providing only virgin wool is used."

"How do the clothing men figure that there should be a \$10 advance in their price?" asks *The Rural New Yorker*:

"It is doubtful if 4 pounds of virgin wool enter into the average suit. The proposed tariff on wool is less than the duty under the present 'emergency' law, and most of the cloth now being sold is made from 'free' wool, imported last year at the very lowest price in history. Where do they get that \$10?"

"The manufacturers of woolen cloth," says *Wallaces' Farmer*, owned by the family of the present Republican Secretary of Agriculture, "have been telling the consumer that he would have to pay five dollars more per suit for his clothes this year, due to the demands of the sheep farmer for protection. This is as merry a little lie as has been put forward in the public prints for some time, but no doubt it has had its effect."

But to most of the agricultural journals and to those daily papers with a farming clientele the farmers are only sitting down to a Barmecidean feast. "One need not be a bearded prophet," says *The National Stockman and Farmer* (Pittsburgh), "to foretell that farmers will see some day that their supposed representatives have been badly outswapped in this tariff trading." "The net result of the new tariff, as far as can be foretold now, will be to take from the farmer several dollars in increased prices of manufactured goods for every dollar that he gains through protection on his own products," is the view of *The Prairie Farmer* (Chicago). It is "imaginary benefits" the farmers receive, according to the *Richmond Times-Dispatch* (Dem.). "The farmer has been hoodwinked; he is a paper beneficiary" is the claim of the *St. Louis Post-Dispatch* (Ind.), and "had not the Senate farm bloc entered into a plundering partnership with other interests this 'tariff of abominations' could never have been passed, they could never have mustered the effrontery necessary to pass it." With the farmers sitting in, "the tariff now represents the composite selfishness of the country," declares the *New York Commercial*. And according to *The Wall Street Journal* "the farmer who expects any material benefit from this law will find himself asking his Representatives in Congress awkward questions before a year goes by, and they will probably promise to make bad worse, being as ignorant as himself."

"The tariff on corn is the worst swindle in the bill," is another analysis by the *Kansas City Star* of the "farm tariff pottage brewed in Washington." As the *Missouri* daily argues:

"With this country raising around three billion bushels—unless the hot winds have played too much havoc—what effect will the annual imports of a few million bushels be?"

"The test of the tariff on wheat is how it has worked. The emergency tariff became effective May 18, 1921. It provides a 25-cent a bushel levy. Only 5 cents more is proposed now. The 25-cent duty was to do wonders. Yet wheat has gone down and down until now it is well below a dollar on the farm. That's not theory; it's fact. The tariff hasn't sent the wheat down. But it has been utterly ineffective in keeping it up, and so will the new tariff be. That's because the wheat price depends upon a world market. The most that is claimed for the wheat schedule is that it may influence northern spring wheat some 6 cents a bushel. They have to use charts and diagrams to draw roundabout curves to show where it benefits."

TOO MANY MEN GOING TO COLLEGE?

THE SPECTACLE of several hundred of the new students of Harvard walking the streets of Cambridge at night, temporarily homeless, because the new campus accommodations were already overcrowded on Harvard's 287th opening day, was the news dispatches' contribution to the discussion of the question whether there are "too many men going to college" that is raised by Dr. Hopkins, the president of Dartmouth College. Dr. Hopkins in his address to the student body at the opening of Dartmouth's academic year had stated that the "opportunities of higher education ought to be increasingly restricted to an aristocracy of brains, composed of the intellectually alert and eager, if democracy is to become a quality product rather than one of quantity." Dr. Hopkins's novel idea caught the immediate attention of the public and the neighboring *Manchester Daily Mirror* gives this quotation of his revolutionary ideas on modern education:

"Too many men are going to college. The opportunities for securing an education by way of the college course are definitely a privilege and not at all a universal right. The funds available for appropriation to the uses of institutions of higher learning are not limitless and can not be made so, whether their origin be sought in the resources of public taxation or in the securable benefactions for the enhancing of private endowments.

"It consequently becomes essential that a working theory be sought that will cooperate with some degree of accuracy to define the individuals who shall make up the group to whom, in justice to the public good, the privilege shall be extended, and to specify those from whom the privilege should be withheld.

"This is a twofold necessity, on the one hand, that men incapable of profiting by the advantages which the college offers or indisposed shall not be withdrawn from useful work to spend their time profitlessly, in idleness acquiring false standards of living, and on the other hand that the contribution which the college is capable of making to the lives of competent men and through them to society shall not be too largely lessened by the slackening of pace due to the presence of men indifferent or wanting in capacity."

Chancellor Brown, speaking for New York University, states that he does not think there are too many college men and that the saturation point is far distant:

"It has been shown by the Army tests during the war that from 12 to 15 per cent. of the men had the capacity to pursue college courses. There are too many college students if their mere number prevents us from giving a fit training to the destined leaders of men within the next generation, but we can not admit this without confessing a certain bankruptcy of inventive resourcefulness, a limitation which as thinking men we can not accept. It is not to be forgotten that a large part of the recent expansion of universities answers to the call of our industries."

There can not be, maintains the *New York Times*, too many men going to college, if "those who do go, are 'educable' and if the college really *educates* them when they go and does not lead them away from really productive work, out of sympathy with their families and with those who with their hands 'support the fabric of the world.'" Then, too, insists S. S. McClure, editor of *McClure's Magazine*, "there is no power on earth that can segregate the 'aristocracy of brains'; no test yet devised that can determine what prospective student is going to make the most of his opportunity." He appeals to history—

"We have had twenty-nine presidents of the United States. The college man may be justly proud that nineteen of them

RATES ON FARM PRODUCTS IN THREE TARIFFS

	Payne-Aldrich Republican Tariff, 1909	Underwood Democratic Tariff, 1913	Fordney- McCumber Tariff
Bacon.....	4 cts. lb.	Free	2 cts.
Rice.....	2 cts. lb.	1 ct.	2 cts.
Wheat.....	25 cts. bus.	Free	30 cts.
Cuban raw sugar	1.35 cts. lb.	1 ct.	1.76 cts.
Cheese.....	6 cts.	20 per cent.	5 cts.
Raw wool.....	33 cts.	Free	31 cts.
Milk.....	2 cts. gal.	Free	2½ cts.
Oats.....	15 cts. bus.	6 cts.	15 cts.
Eggs.....	5 cts. doz.	Free	8 cts.
Almonds.....	4 cts. lb.	3 cts.	4½ cts.
Lemons.....	1½ cts. lb.	½ ct.	2 cts.
Potatoes.....	25 cts. bus.	Free	50 cts. per 100 lbs.

have been college graduates. But among the other ten; who had no college education, we find Lincoln and Washington."

The Boston *Globe* sums up the progress of higher education and the effort of democracies to raise the standard of men, but it finds that in the end what counts is not brains, but character:

"Democracy (at least so much of it as we have) attempts to raise the level of the mass intelligence certainly to the estate of a grammar-school training. This undertaking is relatively new in the world; it is a thunderingly difficult enterprise, and we are only learning how to do it as we go. Naturally we only make a part-way success of it.

"Our principal difficulty is this: Our mass-education has to train millions of youngsters. Obligated to train them in bulk, we end by making them all very much alike, in speech, clothes, manners, information, and ways of thinking. Their brains are a species of 'standardized quantity production.' Now progress is not furthered by people being as much as possible alike. It is furthered by their being different, being individual, being themselves. 'All progress,' says Spencer, 'is differentiation.' This quantity system of mass-education stifles individuality. It is true, democracy requires mass-education; but it also requires something more—the independent thought, speech, and action of highly individualistic people; and this requirement in our educational system we have yet to meet, and must meet.

"As for saying that too many men are going to college, what is that but inviting an enormous extension of State universities (not always the most successful kind) by a nation which has shown abundant willingness to dig down into its pocket for popular education?

"All talk of an 'aristocracy of brains' remains necessarily superficial. For higher education trains, and must train, mainly the conscious intelligence. But there is something that goes higher and deeper than conscious intelligence—too high and too deep for measuring—and that is personality. Beyond the conscious intelligence which education can discipline lies the something greater, which we call character. It is no respecter of birth, money, environment, intellectual agility or cultural training. It is the only winner in the race which ends only with life, and the age of high school and college is usually too early to decide who has it or has it not."

A few facts about the present attendance at the universities, and its growth since 1900, will be interesting. The enrolment of students in the universities and colleges of the United States, according to the "Statesman's Year Book," was 115,271, in 1900; 184,712, in 1910; 237,168, in 1915, and 290,106 in 1918. The enrolment this year is over the 300,000 mark, and well on toward 400,000. So there are now three students in the universities to one at the beginning of the century. New York City is not usually looked upon as a university center, but in 1921 there were 52,882 students attending its three colleges: Columbia, now the largest university in the world, had 26,006 students; the College of the City of New York, 15,362; New York University, 11,514. The second largest university is the University of California with an enrolment of 17,909. Universities with an enrolment of over ten thousand students are the great universities of Michigan, with 10,527; Illinois, 10,198; Minnesota, 10,711; Pennsylvania, 14,030; Wisconsin, 10,507, and the University of Chicago, 12,576.

BRICKS AND ROSES FOR CONGRESS

TRUE, MORE BRICKBATS THAN BOUQUETS are thrown at the Sixty-seventh Congress, at the close of its second session, as a reward for its seventeen months of almost continuous labor. Neither Republicans nor Democrats are spared in the wholesale indictments. Yet, as one prominent independent Democratic daily observes, "the record to date of the 67th is neither as good as its apologists would have the country believe, nor as bad as its critics aver." "The record is by no means a party one," maintains the independent *Providence Journal*. The main trouble, as the independent Republican *Manchester Union* sees it, is that "Congress was required to do the impossible." Called into session less than two and a half years after the Armistice, it is admitted by impar-

tial observers that to find remedies for conditions for which there were no precedents was a task that would have tested the ability of any Congress.

Perhaps the outstanding features of the session were the passage of the new tariff law, with its elastic provisions; the ratification of the treaties growing out of the Limitation of Armaments Conference; and the passage of the Bonus Bill, which was vetoed by the President. The following are some of the other important measures passed by Congress, as gleaned from Washington dispatches:

It provided for the reduction of the number of Army officers to meet the requirements of the decreased Army of 125,000 men.

It created a foreign debt commission, with five members to be appointed by the President, to refund or convert and extend the time of payment of the principal and interest of foreign obligations.

It appropriated \$20,000,000 for the relief of the starving Russian people.

It provided for a Federal Fuel Distributor and also for a fact-finding commission of seven members to investigate the coal industry.

It appropriated \$17,000,000 for the construction of additional hospitals for the United States Veterans' Bureau.

It appropriated half a million dollars to enable the Attorney-General to prosecute war frauds.

Furthermore, writes Congressman Guy U. Hardy (Rep., Colo.), in *The National Republican* (Wash.), "the nation's debt has been cut \$1,000,000,000 in one short year, and the running expenses of the Government have been cut below what they were two years ago by over \$1,000,000,000. The payroll of the Government, including Army, Navy and civilians, has been cut from 1,186,052 persons, the 1920 figures, to about 777,000 for the fiscal year." Senator Smoot (Rep., Utah) furnishes still other complimentary figures:

"It enacted the budget law, under which the economy program of this Administration was made possible.

"It reduced the public taxes \$818,000,000 a year, the bulk of which is lifted from the family and individual of average income.

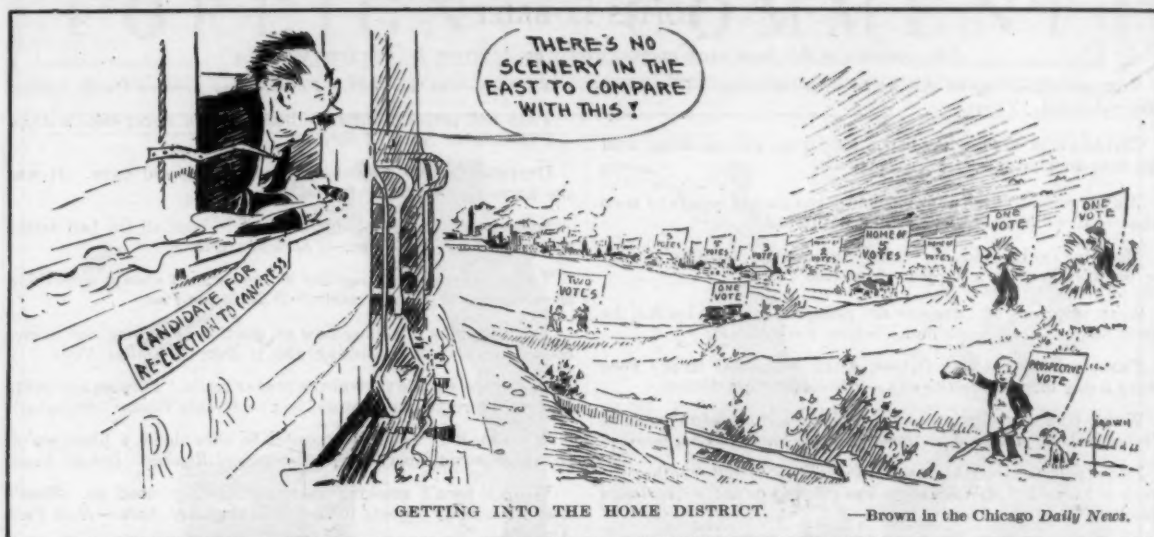
"It found 5,000,000 men idle. To prevent further aggravation of the unemployment situation it enacted the restrictive immigration law.

"It found agriculture facing ruin. To relieve the situation it



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—Cassel in the New York Evening World.



revived the War Finance Corporation. It passed the farmer's emergency tariff. It increased the funds of the Federal Farm Loan Bank in the sum of \$25,000,000. It enacted the Sweet law, which created the Veterans' Bureau.

"It found the country officially in a state of war with Germany and Austro-Hungary, and, by a joint resolution, reestablished peace with these two nations."

"The public," we are reminded by the Indianapolis *Star* (Ind. Rep.), "is not unmindful of the fact that when the present Congress took charge the nation was floundering in a flood of war-time extravagance and waste such as the world had never seen." "Congress inherited the messiest mess in all legislative history," agrees the independent Washington *Star*, which is in a good position to know. True, admits the New York *Tribune* (Rep.), "the attempt to pass the Bonus Bill was discreditable." But "when the full record of the 67th Congress [which meets for the short session in December] is compiled, it will show many real accomplishments," declares the Republican Buffalo *News*. "This Congress is not perfect; no Congress ever will be," adds *The News*. But "however its work may be judged, it is not slothful," points out the independent Springfield *Republican*.

"The increasing prosperity of the nation is convincing evidence of the efficacy of the Administration's dealing with economic problems," observes the independent Washington *Post*, which declares that "except for its support of the Bonus Bill—the one relapse into cheap politics—the record of Congress is crowded with constructive legislation."

Hard-hearted Democratic editors, however, discount all these statements as coming from a party and a party press which feels the necessity of justifying the Republican Congress on the eve of a general election. And even such a well-known independent newspaper as the Philadelphia *Public Ledger* admits that "the 67th Congress will not stand high in legislative history." In fact, asserts the independent Democratic Baltimore *Sun*, "there has never been a time when Congress stood lower in the estimation of the people than it does at present, and rightly so. This Congress has been a failure because it has been without true leadership and without consistent character." "A system of legislation on the demands of mutinous groups or blocs, through log-rolling of the most sordid character, has supplanted decisions by party majorities," notes the independent Democratic New York *Times*. "The 67th has shown no statesmanship, no leadership, no intelligent organization," charges the independent Democratic Philadelphia *Record*; "moreover, it has brought forward no leaders of the first, or even of the second rate." In the opinion of the independent Democratic New York *World*—

"There have been other Congresses that were bad; there have been other Congresses that were derelict in their duty; there have been other Congresses that were incompetent and leaderless; but by common consent the Sixty-seventh Congress has been the worst bungler of them all. It has become a Congress practically without friends. Republicans not only refuse to defend it, but they join eagerly with Democrats in condemning it. It has proved itself incapable of evolving either foreign or domestic policies to meet the needs of the country. It has ceased to be representative in the very essentials of representative Government. It has become a thing apart from the life of the people, unable to help in the solution of their problems, and making a bad matter worse by its dull-minded interference."

"The Republicans point to their record for economy," exclaims the Democratic Brooklyn *Citizen*, "yet only a few days ago the Secretary of the Treasury announced that the deficit for the current year will amount to not less than \$650,000,000, and will probably be even greater for the coming twelve months." "There was a demand for economy," remarks the independent Indianapolis *News*, "but Congress created twenty-five new Federal judgeships, thus adding considerably to the payroll." "Republican spokesmen who prate of great economies count largely on the gullibility of their hearers," thinks the Cleveland *Plain Dealer* (Ind. Dem.). As for the wholesale thinning of ranks among Government employees, "that began before this Congress was convened, and would have continued had it been Democratic instead of Republican," avers the Brooklyn *Eagle* (Ind. Dem.). "Part of the reduction in expenditure came about naturally in the termination of war activities, therefore self-praise from a Congress that would have saddled the country with four billions in taxes through bonus legislation, prompted solely through hope of political gain, comes with unbecoming grace," as the New York *Commercial* sees it.

After a close study of the record of the 67th Congress the Democratic Richmond *Times-Dispatch* concludes that "the session was as futile and barren as it was long-winded and tiresome," and that "it failed because it had no program of action worthy of the name." And in the opinion of the Democratic Pittsburgh *Sun*:

"The trouble with the Sixty-seventh session has been that it became possessed very early of 'buck fever' at the prospect of a political reversal in 1922. The only course that could have averted such a reversal was one of conscientious attention to the public business. Instead of pursuing such a course, Congress as a body entered upon an orgy of political log-rolling, double-crossing and pandering for votes without parallel in recent history. The Sixty-seventh Congress tried to carry water on both shoulders and, not having the intelligence for the task, spilled it."

TOPICS IN BRIEF

(An extension of this department appears weekly on the screen as "Fun from the Press")

You can't clean up in this world with soft-soap. It requires grit.—*Asheville Times*.

CIVILIZATION always has had a hard time getting along with the next-door neighbors.—*Toledo Blade*.

WE'RE going to need those locks we put on our cellars to keep what coal we have left.—*New York Tribune*.

MR. BRYAN has cut his hair. Apparently, he didn't want to be mistaken for a flapper.—*Asheville Times*.

SOME members of Congress are going to listen twice for the brass band as they reach home.—*New York Herald*.

THE chief trouble with Detroit is that whenever Henry Ford takes a day off it stops the city.—*Cleveland Plain Dealer*.

WHEN Rudyard Kipling cooled off he found he didn't mean it. Probably he'd just paid his income tax.—*Portland Oregonian*.

PROBABLY the Germans are best qualified to tell whether the work of Secretary of War Baker was efficient or not.—*Charleston Gazette*.

"CHICAGO Judge Appeals to Law to Curb U. S. Murderers." Many of our best people think it would be an excellent idea.—*St. Paul Dispatch*.

ANY baseball coach can tell you that too many young men go to college without having learned the basic principles of infelding.—*New York Herald*.

MUCH generous emotion has been exprest lately on this Turkish matter, and every man expects that England will do his duty.—*New York Times*.

NEWSPAPER tells of New Jersey woman who used a telephone for the first time in seventy years. Probably she was on a party line.—*New York American*.

THERE being no laws as yet to regulate broadcasting by radio, the expected has happened. Some cruel persons are sending out free verse.—*Cincinnati Enquirer*.

RESULTS of THE LITERARY DIGEST straw vote on Prohibition indicates that a lot of Americans think it is easier to reform our laws than our people.—*The Weekly Review (Shanghai)*.

AN international board is to revise the customs in China, and we should suggest that its first step be to abolish the custom of a civil war every hot season.—*The Weekly Review (Shanghai)*.

CHINA wants a constitution. Other nations might join hands and give her one, for instance many Americans would be willing to give away some of the new parts of ours.—*The Weekly Review (Shanghai)*.

IT is said 3,000 cases of American soap have been shipped to Russia. We can't predict the result, but it may be interpreted as an act of war.—*Houston Post*.

AN American visitor now in London is said to have exprest a desire to winter in England again next summer.—*Punch*.

IF the Prohibitionists want to suppress the jokes on Prohibition they must suppress the jokes in Prohibition.—*Columbia Record*.

How Western children will be thrilled, fifty years from now, by movies of the wild and woolly gunmen of the East.—*Pottsville Journal*.

TH' RACE is to the swift.—*Philadelphia Evening Public Ledger*.

THEY call prices prohibitive because they never take a drop.—*Philadelphia North American*.

DRIVERS had no more horse sense in the old days. It was the horse that had it.—*Baltimore Sun*.

IT is simply impossible for a fellow to beat all the fast trains to all the grade crossings.—*Charleston Gazette*.

THE Allies could get together if there wasn't always something each wanted to get separately.—*Washington Post*.

THE difficulty of telling how an election is coming out is succeeded by that of explaining why it didn't.—*Dallas News*.

IN Europe's trade revival the prayer reads, "Forgive our debts and we'll forgive our debtors."—*The Weekly Review (Shanghai)*.

WONDER if it would be possible to slow down a phonograph to where it could play *The Congressional Record*?—*Detroit News*.

WOMEN aren't smoking so much as they used to. That's because nobody objects to their smoking any more.—*New York Tribune*.

IF the currency printing presses in Europe would declare a lessatorium, a moratorium might not be needed.—*St. Louis Globe-Democrat*.

A FRENCH author of best sellers has been kidnaped and is held in hiding. We should do more of that sort of thing in this country.—*St. Paul Dispatch*.

IT is a sad commentary on Yankee prudence that the people who fed all Europe are in danger of not having enough coal to cook breakfast.—*Washington Post*.

THE Germans naturally feel that if they had been allowed to win the war there wouldn't be any troublesome question of German reparations.—*Brooklyn Eagle*.

THAT doctor who advocates washing dishes as a cure for neurasthenia may be right scientifically, but he is in danger of dying a poor man.—*Chicago Daily News*.

WE were not aware that they had settled the question of who won the war, but it may be significant to note that Europe has about agreed upon who should pay for it.—*The Weekly Review (Shanghai)*.

OF course, we'll hold aloof. The trouble in Asia Minor is untimely. If Turkey had only held off until Thanksgiving, we'd know what to do with her.—*Philadelphia Evening Public Ledger*.

THERE is said to be a trick heat clause in the new leases landlords are using. Is the landlord losing faith in his janitor?—*New York Morning Telegraph*.

ADVICE to a coal dealer: If you can't knock (a few dollars off) don't boost (the price).—*Philadelphia Evening Public Ledger*.

"RADIO Tune Plan Successful in Part," says a headline. It couldn't have been the part we heard.—*New York Morning Telegraph*.

ON the other hand, if it is going to be impossible to get coal there is still a lot of discarded political timber available.—*Detroit News*.

ONE of the economies of the dry period is that it now takes but one hip to make a hurrah instead of two, as formerly.—*Cincinnati Enquirer*.



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CRACKING THE WHIP.

The longer you get the line the harder it goes with the cracker.

—Darling in Collier's.

FOREIGN - COMMENT



"POOR GERMAN BIRD OF FREEDOM!"
Hunted "not only in Bavaria, but throughout Germany."
—Kladderadatsch (Berlin).



BAVARIA PREFERS HER LION.
BAVARIA: "The historic Lion of Bavaria is more to be trusted than your newly bred Berlin police dog."
—Kikeriki (Vienna).

GERMAN AND AUSTRIAN JIBES AT THE LAW TO SAFEGUARD THE REPUBLIC.

THE MUNICH-BERLIN "ARMISTICE"

RECURRENT EXPLOSIONS in the strained relations between Munich and Berlin are foreseen by some German newspapers despite the fact that the Central Government at Berlin and the Bavarian authorities have come to an adjustment of the differences arising from the law enacted by the legislators of the Reich for safeguarding the Republic. This defense law came into being, it is recalled by the Berlin correspondent of the *Manchester Guardian*, as the result of the assassination of Foreign Minister Walter Rathenau. Political murder, said to be inspired by secret organizations, had gone unpunished until the enactment of this measure which provides a special Court of Justice and a special police organization to cope with the enemies of the republican government. Bavaria balked, we are told, and passed a law of its own for the protection of the Republic; but, in accordance with the agreement with Berlin, has abrogated this ordinance. The Central Government's law, says the *Guardian's* correspondent, has resulted in the arrest of hundreds of suspected accomplices in the Rathenau murder, with the good result that "none of the other men like Warburg, Wirth and Einstein, who were to be assassinated, have been touched." Thus the law for the defense of the Republic having "almost achieved its purpose by now," Berlin has "not sacrificed over much by giving way to Munich." But altho the crisis is avoided, the *Frankfurter Zeitung* declares that the result is not peace but "an armistice," and it points out

that the organs of the Right section of opinion in Bavaria are urging their followers to organize against the chance of future difficulties. One of these newspapers, the *Muenchner Zeitung*, makes similar proposals to the other German states, especially those in South Germany, and exhorts them to "fight the good fight, side by side with Bavaria, against the Reich and the Constitution of Weimar."

As summarized by the *Muenchner Neueste Nachrichten*, the new arrangement between Berlin and Munich provides that the Reich shall not resort to extraordinary but only to constitutional methods, except when the latter seem "absolutely inadequate." In no other case may the Central Government take action that the Bavarians hold to be an encroachment on the sovereignty of the states. If such extraordinary measures seem inevitable, before putting them into action, the Reich authorities must first consult with the competent authorities of the states. This is required, it is said, in order to avoid conflict. An adjunct to the Court of Justice is to be created in the form of a chamber consisting of three judges and three lawyers who are to be named by agreement between the Central Government and the states interested. The preponderate weight acquired by Bavaria through the establishment of this new institution is not very joyfully noted by other sections of South Germany and the *Stuttgarter Neues Tageblatt* observes:

"It is time for the governments of Germany, particularly that



of Wurtemberg, to begin to take an interest in these matters. If Bavaria really aims to take upon itself the right to speak in the name of all the states of South Germany, this pretension of hers must be curbed. Never will we accept a situation by which Munich becomes the factor of dominance."

As viewed from the altitude of Swiss democracy, the recalcitrant Bavarians are really the victors in the arrangement concluded with Berlin, for the *Journal de Genève* tell us that:

"The compromise which the Bavarians have accepted with all kinds of reservations is really a grave blow to the principle of national unity and to the success of the federalist movement. The Government of the Reich actually promises that in applying the law for the protection of the Republic, it will not interfere in the domestic concerns of the states. In a word, its action will go no farther than a close cooperation with the local governments. It practically cedes to the states the right of control over the disciplinary courts which are charged with the responsibility of the loyalty of its officers. It allows the states a free hand in the organization of the criminal police and, except in cases of the extremest gravity, it relinquishes the executive power. But the most important clause of the agreement is that concerning the constitution of the various senates that have to do with the affairs of the different states. According to the *Vossische Zeitung* the number of these senates will be reduced to two, one for North Germany and the other for South Germany. The latter will be made up of three Bavarian members, two from Wurtemberg, one from Hesse and one from Baden, who will be appointed, not by Berlin, but by their particular governments. Thus the Central Power retains only a semblance of authority and this innovation may be the point of departure for a split extending far beyond the domain of jurisprudence."

A revelation of the real objective of the Munich Government is said to be found in a manifesto issued by the Bavarian Popular Party in which we read:

"The compromise of Berlin was imposed upon us by events. Nevertheless, Bavaria has gained an advance guard success. But the Constitution of Weimar remains the base of operations, and as long as this constitution is not revised in its federalist sense, all the agreements concluded with the Government of the Reich have only a severely limited value.

"Bavaria has fought for the sovereign rights of the state in union with the Bavarian Popular Party, the German National Party and the German Popular Party."

It would appear, therefore, remarks the *Journal de Genève*, that opposition to the German Republic is composed of a coalition of the elements of the Right and of the Extreme Right, not only in Bavaria, but throughout Germany. It adds that "after long and brutal opposition of force the German reactionaries are now transferring their attack to a juridical and constitutional base," and "in widening their front they undertake a combined offensive against the growing Republic."

But a marked difference of opinion on the outcome of the Munich-Berlin "quarrel" exists among observers on the spot in Germany, as evidenced by the statements of some British writers that the fight between this local government and the Central Government had practically come to nothing; and the suggestion of the Social-Democratic *Vorwaerts* that the Bavarian Government ought to be very glad of the opportunity to make such a settlement as has been made or else the questions in dispute between the two capitals might have been "much more fundamentally ventilated." There is no doubt that this fight at home has convinced some German journals that it put Germany in a bad light for foreign observation, and such is the impression suggested by the *Vossische Zeitung*, which says it is waste of time to discuss which of the two, Munich or Berlin, shows itself the stronger in the outcome of their negotiations, and it adds:

"The essential fact is that Bavaria accepts the law for the protection of the Republic without reserve and without restriction. On the other hand, the Government of the Reich has succeeded in dispelling the anxieties of Munich with regard to the protection of state sovereignty.

"The conflict which is ended so happily should be the last one to occur between Bavaria and the Reich. In our present unhappy situation as regards foreign relations, we can not permit ourselves to indulge in the luxury of domestic disputes."



MUNICH'S TWIN MONARCHIST TOWERS.

A Berlin symbolic cartoon of Munich watched over for the Monarchists by a military tower with helmeted top and a derby-crowned tower of the Orghesch, a secret organization said to have the same aim as the militarists in fighting against the Republic.

—*Lustige Blaetter* (Berlin).

SWEDEN'S DRINK REFERENDUM

THE FIRST THING of importance about the vote on Prohibition in Sweden, we are told, is to keep in mind that it was a referendum merely of an advisory character. Most to be hoped from it was a large majority on either side calculated to influence future Prohibition policies in Sweden decisively. Second in interest, perhaps, is the discovery that in the preelection campaign Sweden was visited by numerous lecturers from the United States, Norway and Finland, who instructed Swedish hearers on conditions created by Prohibition in their respective countries. The result of the referendum, we learn from Swedish newspapers, shows a small majority in favor of the "wets" and the preliminary figures credit the "Noes" with 931,423 votes and the "Ayes" with 900,901. Several country districts showed a strong sentiment for Prohibition, while the larger cities like Stockholm and Gothenberg returned majorities "overwhelmingly wet." The preliminary figures for Stockholm are 21,910 for Prohibition and 139,958 against Prohibition.

The Swedish press further inform us that according to Government regulations every Swedish citizen, man or woman, above 23 years of age, was entitled to vote. Those in favor of passing a law forbidding the sale and manufacture of liquor containing more than 2¼ per cent. of alcohol were supposed to vote "Yes"; those desiring no change in Sweden's present system of rationing liquor were supposed to vote "No." It is pointed out that the present regulation permits Swedish adults to have a *Motbok* through which they may obtain a specified amount of liquor. The amount permitted each month by the *Motbok* arrangement runs from one to four liters, according to the age, position and habits of the possessor of the *Motbok*. The Swedish Premier Branting says in the Stockholm *Tidningen* that:

"The votes polled demonstrate clearly that the attempt at grouping the Swedish people within the Prohibition lines has failed. The work for increased temperance must now be founded on other things than Prohibition, and it must be hoped that those who worked for Prohibition will now devote themselves to the less extreme and, in the long run, more effective branches of



R-E-M-O-R-S-E

"Ah, if this is the consequence of drink. I will be a prohibitionist."
—Karikaturen (Christiania).

temperance work. In these efforts and in this work they may better count on support even from those who voted 'No' in the referendum."

While the three leading Prohibition organizations in Sweden have issued a manifesto conceding that at present there is no ground for a continued campaign in favor of a national Prohibition law, the Swedish press point out that the manifesto urges on the other hand a campaign to elect the greatest possible number of Prohibitionists to seats in Parliament and on municipal boards. The Prohibition press in Sweden seems generally disappointed with the outcome of the referendum, although they are resolved not so much to stop fighting for their cause as to change their tactics. In an interview in the *Seenska Dagbladet*, a Prohibition leader, Mr. Alexis Bjorkman, concedes that: "With the figures as revealed by the referendum, it is plain that to make the whole country dry at one time is out of the question. All we can do is to make the country dry piece by piece, as was done in America." The same thought is expressed by the Prohibition organ *Vasterbottens-Kuriren*, which hopes that the Prohibitionists will henceforth concentrate their exertions on local Prohibition, and it adds:

"One of the first things to be done is to ascertain why the Province of Norrland, with seventy-five to eighty per cent. of its population in favor of Prohibition, should allow itself to be dominated by the liquor majorities of Stockholm and Skanne."

Another dry organ, the *Nerikes-Tidningen*, considers that the referendum is of "illuminating and guiding value" in the continuous struggle for Prohibition which "nobody needs to doubt will some day be crowned with victory." But such dry newspapers as *Ostgoten* and *Sundsvalls Tidning* indulge in no such optimism, yet urge the people who are interested in temperance that they "should now safeguard what has been gained through the present ration system, and that the Prohibitionists use their efforts to improve the system."

Turning now to the anti-Prohibition press, we find the Stockholm *Dagens Nyheter* expressing surprise at the strong showing of the wet forces and remarking that:

"The victory of common sense against stark, blind fanaticism,



SWEDEN'S FAMOUS AUGUST 27TH.
Voting "yes" or "no" in the drink referendum.

—Kasper (Stockholm).

led by political lust of power and self-righteous sectarianism, is a victory that carries obligations. It is now the duty of all who have striven in the campaign to make the nation temperate without Prohibition, to show that they have something more than a negative program. That "more" is their common positive aim to establish real temperance among the people which makes any thought of Prohibition superfluous."

The real benefit of the referendum, according to the Stockholm *Svenska Dagbladet*, is that it averted "the greatest danger to the maintenance of respect for law in Sweden," which would have imperilled the country, if, "as the leading Prohibition organ stated before the referendum was taken, a decisive majority in favor of Prohibition meant an early introduction of Prohibition." "It is not the liquor interests which have triumphed," observes the *Nya Dagligt Allehanda*, "but the interest of temperance and morals."

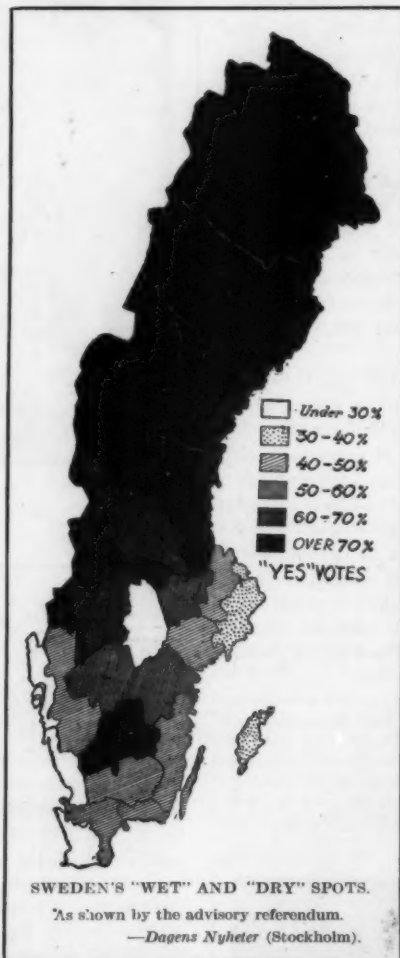
AN ITALIAN HINT TO ENGLAND

THE ONLY WAY England can effectively help in the reconstruction of Europe, declares the Milan *Corriere della Sera*, is to cross off all the debts owed by her allies; and in return for such action, she can ask France, Italy and Belgium to cancel the same amount from their bills against Germany for reparations. In August past, this important newspaper goes on to say, France owed England 575 millions of pounds sterling, Italy owed 512, and Belgium 104, making in all 1,191 millions of pounds sterling, which equals 24 milliards of gold marks. Remember that the German debt for reparations amounts to 84 milliards of gold marks, it is argued, and that of this sum about 22 per cent., that is to say, 18 milliards, is due to England. It is obvious at once that by England's renunciation of the reparations which are due to her (18 milliards) and of credits toward France, Italy and Belgium, with the cancellation of an equal sum of German reparations (24 milliards), the debt of Germany for reparations will be reduced to 42 milliards of gold marks. This daily proceeds:

"This is the only way to save Europe. Germany can pay 42 milliards in a reasonable number of years. If she did not agree to do so, M. Poincaré would be right in charging her with unwillingness and with having the intention of ruining her conquerors economically in order to attack them at an opportune moment, and have her revenge. Who would dare in such an eventuality to reproach France for wishing to take the means of timely protection against such a terrible menace? The decisive word, therefore, rests with Mr. Lloyd George, and if he really desires peace and the reconstruction of Europe, he should call the Allies and Germany together to discuss both reparations and inter-allied debts. Let him lay his cards on the table by declaring his willingness to wipe off the debts of the Allies on condition that the Allies renounce an equal sum of reparations, and that Germany give serious evidence of her intention and means of paying the 42 milliards of gold marks that she will still owe.

"In 1871 France courageously paid up her indemnity of five milliards of gold francs in one year, and this was an enormous sum for the time. If the Germans are as patriotic as the French

were in 1871 they ought to be able to pay 42 milliards in thirty-three years. As for the United States, that country should eventually see things as they are and cancel her war debts, but England should be the first one to show the good example. England can offer nothing in reply to M. Poincaré when he says that the suppression of these debts is justified not only on economic grounds but also on moral grounds."



LAND FOR ITALY'S EX-SERVICE MEN

IT SOUNDED FINE during the war, we are told, when the cry rose over Italy that as a reward to her fighters and their families the large estates of the country should be nationalized and parcelled among ex-service men, but to realize the project requires billions of lire and Italy can not afford the expense. In some places, writes the Rome correspondent of *Il Popolo* (New York), the landless peasants "did not want to wait for the end of the war, but invaded and appropriated large estates, tilled them and kept the returns." Many of these invasions of large estates happened not where the land was unused but where it was well cultivated, and this informant remarks that these virtually are the "only instances where partition of large estates has been a success." In some other instances, it is said, veterans' associations have rented or bought large estates, and by applying more modern methods have made good investments of their capital and work. But these are "isolated cases" and it is pointed out that—

"This was not enough to repay the debt contracted by the nation with the returned soldiers; so the Catholic party thought it necessary to present to Parliament a bill authorizing the State to buy large unused estates, those capable

of cultivation, those badly cultivated, and those under extensive, instead of intensive, cultivation; to parcel them, to provide roads, aqueducts, etc., and then to sell such lands to the veterans at cost and on the instalment plan. The original project used a definition of the estates which made them liable to nationalization and partition so extensive as to include all large estates, no matter how well cultivated. But Parliament, before passing the bill, restricted its aim to the actually unused, or badly used, large estates, greatly improvable by better methods.

"The aim of the law, as passed, is laudable; on one hand, it makes ownership of land not a purely individual matter, but a social function, the justification for which rests in the common welfare; on the other hand, it serves to show the poor peasants that the State really intends to help. But most of those who know believe the real help afforded will be less than it promises.

"Gigantic artificial lakes and aqueducts, costing hundreds of millions, must be built, and that would take years; or powerful pumps must be constructed to catch the water going to waste underground, and to distribute it through thousands of trenches. Such improvements would cost millions and be years in building. Then a network of highways and railroads must be constructed plus all the bridges, viaducts and tunnels—a tremendous task. Last, but not least, another imposing task: that of draining nearby swamps, to make it possible to live where it is impossible now.

"All these expenses, probably billions of lire, and all these improvements that assuredly would take many years, would increase somewhat the tillable soil of Italy; but students of the subject question whether the game is worth the candle."

SCIENCE - AND - INVENTION

COINING DUST

TONS AND TONS OF DUST of all kinds, once thrown away, are now used to good purpose, resulting in the multiplication of useful products, and the conversion of deficits into balances on the manufacturer's books. As a nation, the United States has long been noted for its prodigal wastefulness. We have acknowledged it ourselves, but our boastful justification has been, "Well, what of it? We have plenty more!" But now, says William H. Waggaman, of the U. S. Bureau of Soils, writing in *The Scientific American* (New York), we are finally waking up to the hard fact that our wealth and resources are by no means proof against exhaustion. The time has come when we must think, plan, invent, and work hard if we are to continue to hold our place as the leading industrial nation of the world. To take the first case that presents itself, the demand for coal is growing, while the supply is decreasing. Writes Mr. Waggaman:

"In sizing anthracite for the market large tonnages of dust or culm are produced which for years were thrown aside as practically worthless. Tho this dust was recognized as perfectly good coal, its shipment was considered impractical and the consumer did not know how to use it. Now methods and equipment have been devised which have cut down this former waste to a minimum.

"The powdered-coal burner which sprays pulverized fuel into the fire-box or furnace along with a blast of air is finding a wide industrial use. For domestic purposes, anthracite coal-dust is now mixed with an oil binder and pressed into briquettes, which in many respects are equal if not superior to the regular stove coal. In 1918 we consumed nearly one-half million tons.

"The briquetting process is being applied to other materials as well. Metal turnings and filings are being pressed into compact masses which can be charged into furnaces and remelted with the least possible loss. Disintegrated ores and minerals which would either blow away or clog the smelters can be nodulized and handled as satisfactorily as natural lump ore. This has made available immense tonnages of finely divided iron ore formerly considered of little or no economic importance. In some cases other materials which react with or bring about the desired changes in such minerals at high temperatures are mixed and briquetted with the ore and thus more efficient and quicker results are obtained in the furnace than where the various ingredients are each used in large sizes."

A decade or so back, Mr. Waggaman says, nothing short of the dust of a precious metal was considered sufficiently interesting to warrant investigation. But we have since learned that

there are many other kinds of dust which can be converted into dollars. He goes on:

"Curiously enough, in a number of cases where dust has been turned from a menace into a boon, its collection has actually been forced upon an unwilling industry. For instance, many of our valuable metallic ores, particularly of copper and lead, contain very appreciable quantities of arsenic, and in smelting

operations this arsenic is driven off with the furnace gases in the form of a fume or very fine dust. Until means were adopted to prevent it, these fumes were evolved from the huge smelters in our Western States and wafted over the farms and ranches in the surrounding country, with the result that the smelting companies not only had to pay large sums in damages but were confronted with the possibility of being closed down. They sought the best technical aid and advice, and it was not long before bag houses were installed at their plants which removed from the flue gases the bulk of the poisonous dust. Thousands of tons of white arsenic are thus annually collected from the smelters throughout the country and converted into pigments, compounds useful in medicine and in the dye industry, and into insecticides for spraying gardens, orchards, and vineyards. Instead of being a menace to agriculture this arsenic is actually increasing crop yields by ridding our fruit and vegetables of dangerous parasites. Again, in 1920 over 10,000 tons of crude potash salts worth more than \$175,000 were recovered from the dust given off by cement kilns in the United States.

"For years conservationists have cried out against the ruthless drain on our forests and the scandalous waste of good lumber. The United States Forest Service has done everything in its power to stem the tide of timber exhaustion, not only by planting and guarding new forests for future generations but by teaching the present generation how to get more out of the material which has so long been burned or thrown away. If the lumberman, mill-owner, carpenter, builder, and cabinet-maker would all profit by the knowledge gained by the scientists at the Forest Products Laboratory we would be utilizing practically everything pertaining to timber except the knot-holes. The waste of good lumber in those industries manufacturing such products as axe-handles, wheel-spokes, furniture, toys and agricultural implements has been and continues to be enormous. This is partly on account of the unnecessary care taken in selecting the wood, and partly due to the losses entailed in cutting small-dimension stock."

Immense possibilities in timber conservation are offered by what is known as built-up construction, which consists in gluing or fastening together layers of wood. Not only is this built-up stock stronger than solid wood, but it enables us to utilize vast quantities of what was formerly waste. Another variety of wood



Courtesy of "The Scientific American."

THE JEST OF YESTERDAY IS THE FACT OF TO-DAY.

"Most of us have heard the story of the economical farmer who fitted his mule with green spectacles and then fed him excelsior and sawdust in lieu of grass and ensilage. Had not the mule expired, the experiment would have been a great success. To-day, however, this experiment is being repeated in a modified form and with excellent results. Moreover, we do not have to go to the expense of providing the live stock with colored glasses to persuade them that the proffered food is palatable. They eat it with relish and with profit." Making sawdust into cattle food by merely cooking it fifteen minutes with dilute acid under steam pressure.

débris, sawdust, has long been regarded as one of the most hopeless. Immense heaps mark the location of old saw-mills, and it soon collects in such quantities around woodworking establishments that it has to be hauled away by the truckload. Now it can be turned into feed. Says the writer:

"Most of us have heard the story of the economical farmer who fitted his mule with green spectacles and then fed him excelsior and sawdust in lieu of grass and ensilage. Had not the mule expired the experiment would have been a great success. To-day, however, this experiment is being repeated in a modified form and with excellent results. Moreover, we do not have to go to the expense of providing the livestock with colored glasses to persuade them that the proffered food is palatable. They eat it with relish and with profit.

"White-pine sawdust, for instance, when treated with dilute sulfuric acid and cooked under pressure with steam, undergoes a chemical change and is partially converted into glucose, a simple sugar which is both digestible and nutritious. The resultant mixture, which contains from 14 to 18 per cent of glucose, is then neutralized with lime, the sugar dissolved, and the solution filtered off and boiled down under reduced pressure to the consistency of molasses. This molasses is then added to the partially dried sawdust residue, and a product closely resembling bran is obtained.

"The processing of sawdust may be carried a step further and the sugar formed allowed to ferment so that alcohol is produced—not wood alcohol, either, but the type which once was used to rout dull care. It is estimated that 300,000,000 gallons of alcohol could be produced from the sawdust, shavings and scraps of lumber which are annually wasted at the mill. Eventually we must have another motor fuel to enhance or replace our fast dwindling supply of gasoline, and alcohol seems to offer the greatest promise.

"These are only a few of the many things we are doing toward increasing industrial efficiency. It is evident that American industry is more or less alive to the necessity of cutting down its flagrant waste. Probably no other nation has been eating up its principal at a livelier rate than we, altho this principal, if carefully handled, should not only supply our needs and desires, but those of indefinite generations. We have discovered, developed and are using our wealth, and now we are rapidly learning to save it."

BIRD'S SPECTACLES—The remarkable observation has been made that the eyes of birds contain drops of colored oil. For example, domestic fowls look out upon an orange colored world because of the globules of orange-colored oil in the eye, which acts like an orange-colored lens. A careful study of this phenomenon by an investigator named Henning, has revealed the fact, according to *Reclam's Universum*, Leipzig, that the object of this provision is to increase the range of vision, especially in foggy weather. As a matter of fact our own vision can be similarly improved, too, in a fog, by the wearing of orange-colored glasses. If, for example, the unaided eye has a range of 300 yards in such weather, the donning of such spectacles increases the visible distance to 2,000 yards. This provision is

likewise very useful to birds of prey, enabling them to detect the smallest animals on the surface of the earth from great heights. It is said, too, that the reddish yellow oil globules in the eyes of migrating birds make it possible for them to perceive the coast of Africa from the shores of Italy, even in a dim light.

A NEW STANDARD IN LOCOMOTIVES

THE OLD RULE OF SIMPLICITY has been discarded in a new type of engine built for the New York Central lines. By assembling a variety of devices, none of which is claimed to be particularly new or radical, the designer has been able to produce a locomotive that operates with the minimum fuel, weight and cost of repairs, and to secure ease and safety. The statements are made in an article contributed to *Mechanical Engineering* (New York) whose author justifies our headline by his assertion that the new engine "sets a new standard" in railway traction. The continued improvement in steam locomotives may be regarded in some measure as a challenge to electric traction, which altho occupying its own field in increasing degree, will not, at any rate for a long time in the future, succeed in ousting steam completely. He writes:

"Regardless of the gesture threatening electrification of railroads sometime in the future, the development of steam locomotives goes merrily on. The most recent example of remarkable progress is a new Mikado placed in heavy fast-freight service on the Michigan Central. This machine embodies the results of a score of years of study and research and altho no official tests have been taken, the performance has been so satisfactory that the order has been placed for one hundred and fifty according to the same detail specifications. In its initial road test, it hauled 100 heavily laden coal cars and later pulled a train of 140 cars containing more than 9,000 tons of coal, this over the level division between Toledo and Detroit.

"No. 8000," as this extraordinary engine is designated, was built by the Lima Locomotive Works according to designs made under the supervision of President A. H. Smith of the New York Central Lines. The best known practises and devices have been incorporated.

"The first requirement of maximum tractive effort for the minimum weight is an elimination of unnecessary weight and this has been accomplished, without sacrifice of strength, by refinements in design and by the use of alloy steels and hollow axles and crank-pins. Without tender, the locomotive weighs 334,000 pounds. The tender with its capacity of 10,000 gallons of water and 16 tons of coal, weighs 199,700 pounds. Maximum tractive effort of 74,500 pounds is obtainable, a booster on the trailer truck delivering 11,000 pounds. In a statement issued by the New York Central Lines, attention is especially directed to the fact that, compared with the heaviest Mikados in the Michigan Central service. No. 8000, with an increase in weight of only 2 per cent., has an increased tractive power of nearly 8 per cent. from the forward cylinders alone and with the booster the increase is 26 per cent.



SIMPLICITY DISCARDED IN FAVOR OF ECONOMY.

By festooning the locomotive with various devices, the designer makes it operate with less fuel, weight, and repairs, and more ease and safety.

"Perhaps the most noticeable change in this locomotive to achieve greater economy in fuel consumption is the addition of a feed-water heater, installed at the front of the engine over the headlight, high enough to return the condensate to the filter in the rear of the tender. The feedwater pump is shown on the left side of the locomotive.

"The cab design is such that the enginemen perform their duties with the minimum of movement and practically no physical effort. Precision power reverse gear, an Elvin stoker and a power grate shaker are installed for this purpose. The whistle is operated pneumatically. There is a water scoop on the tender.

"For many years, the development of steam locomotives was in size and weight but without systematic improvement in the making and using of steam. With the adoption of superheat, economy of operation was greatly improved but steam-locomotive design is still under great pressure to meet rigid requirements with definite limitations of size and weight and at the same time to equal the best results of marine and stationary practise. In this respect No. 8000, an embodiment of devices not new or radical, sets a new standard.

"Steam locomotives must bear the burden of transportation in this country for some time to come and the development of this machine is a courageous movement toward better practise. The old rule demanding simplicity above all seems to have been discarded."

WEEDS THAT CARRY PLANT DISEASE

A "CARRIER" IS AN INDIVIDUAL harboring disease germs and capable of transmitting them, but not himself suffering from the disease. An apparently healthy individual who may infect others is evidently a menace to the community. Such persons are known to exist, especially in the case of typhoid fever. That they may exist with plant diseases also has now been discovered by two investigators in Purdue University, Indiana, who find that a baffling disease of the tomato plant is carried over the winter and given to the new plants in the following summer by two hardy weeds—ground-cherry and horse-nettle. The story of how they ascertained this and the resulting advice to gardeners are given in *The Country Gentleman* by Albert A. Hansen, who entitles his article "The Typhoid Marys of the Plant World." Writes Mr. Hansen:

"A few years ago the world was startled by the discovery that certain persons are carriers of human diseases. A case was cited of a waitress in a restaurant who unconsciously distributed typhoid right and left among the patrons she served. She soon received the name Typhoid Mary.

"Two Typhoid Marys have recently been discovered in the plant world, and the discovery means much to all who grow tomatoes, whether in gardens, in fields or in greenhouses, particularly growers of canning tomatoes.

"The detectives who made the discovery are two workers in the botanical laboratories of the Purdue University Agricultural Experiment Station—Dr. M. W. Gardner and James B. Kendrick. Whereas the human carrier harbors typhoid, the plant carriers harbor tomato mosaic, a serious disease that annually causes hundreds of thousands of dollars loss to tomato growers and is frequently the limiting factor in profitable tomato culture.



DR. MAX W. GARDNER



JAMES B. KENDRICK

THE DETECTIVES WHO MADE THE DISCOVERY.

They caught two hardy weeds, the ground-cherry and the horse-nettle, in the act of giving a plant disease to the gentle and useful tomato.

Tomato mosaic is one of the most baffling plant diseases known to science. The real cause of the disease is unknown, since it has been impossible to isolate either bacteria or fungi that might be responsible for the trouble.

"The commonly accepted theory is that the mosaic is due to a virus, similar in nature to the virus which is supposed to cause rabies, infantile paralysis and measles in the human family.

"Once a field is infected with mosaic the disease appears year after year in what was hitherto a mysterious manner. Repeated tests showed that neither the soil nor the tomato seeds carried the infection. Whence, then, did it come? It was known that certain insects, notably plant lice, were capable of spreading the virus from one plant to another, but how was the disease carried over winter?

"Gardner and Kendrick started a systematic search for the perennial source of infection. They knew that there were human carriers

of disease, so they reasoned that the infection might be carried by wild plants of the perennial type, and transferred from these hitherto unsuspected sources to the tomatoes by means of insects.

"Working on this theory, the plant culprits were finally located. It was noted that two common weeds, ground-cherry and horse-nettle, frequently exhibited signs of mosaic when growing near diseased tomatoes. It was also noted that neither of these two species was diseased when found growing wild in sections where tomatoes were not cultivated. Another link in the chain of evidence was the fact that both of these weeds grow from deep-running roots that live from year to year, sending up new shoots each spring. And both the ground-cherry and the horse-nettle are closely related botanically to the common tomato.

"Why couldn't the running roots produce diseased shoots year after year, acting as perennial sources of infection? And why couldn't plant lice, flea beetles and other common insects that attack both the weeds and tomatoes carry the mosaic readily from the diseased shoots of ground-cherry and horse-nettle to the young growing tomatoes in the plant beds or in the fields?

"That was the theory the workers attempted to prove. First they inoculated healthy tomato plants with the juices of diseased ground-cherry and horse-nettle. The mosaic was readily transmitted to the tomatoes by this means.

"Then, insects that had fed upon diseased ground-cherry and horse-nettle were inclosed in an insect-proof cage and allowed to feed upon healthy tomato plants. The disease soon became evident on the once thriving tomatoes.

"Again, healthy tomato plants were set out in fields badly infested with mosaic and protected by insect-proof cages, and the plants matured free of mosaic. Diseased ground-cherry and horse-nettle plants were closely watched for several years, and the mosaic was noted each spring in the young shoots.

"Other experiments of a more technical nature were performed, and it was proved that both ground-cherry and horse-nettle carry tomato mosaic year after year and the disease is transmitted from these sources to the tomato crop by means of insects, particularly plant lice."

What does all this mean to the tomato grower? asks Mr. Hansen. It means that one of the most ruinous of all tomato diseases can be controlled by destroying the ground-cherry and horse-nettles in tomato fields, but more particularly in the plant-beds where the young tomato plants are grown before being transplanted. Growers should be especially alert in the

spring, he says, because it is then that most of the infection takes place. The weeds should be cut once a week, since new shoots come up rapidly. Diligent cutting will gradually starve the weeds out and they will disappear. He goes on:

"Most tomato growers are thoroughly familiar with tomato mosaic. For the benefit of those who may not be familiar with the symptoms, diseased plants can be recognized by the mottled, crinkled, distorted appearance of the leaves, particularly the young leaves. In the East the mosaic does not damage the fruit to any extent, the principal loss being due to the decided decrease in yields. Shipments of tomatoes from California have during recent years shown heavy damage from a cause that is not definitely known. Doctor Gardner believes that the cause is mosaic, altho definite proof on this point is not as yet available."

CAUTIONS ABOUT COAL-SUBSTITUTES

SHORTAGE OF COAL THIS WINTER will make it necessary for many domestic consumers to use some substitute for the fuel to which they have become accustomed. This will be especially true of anthracite users. Science Service's *Science News Bulletin* (Washington) gives the following advice:

"The best substitute available is coke. With the bituminous coal production getting back to normal, U. S. Bureau of Mines officials say, there should be plenty of this cleanest of fuels. Coke eliminates smoke, reduces the necessity of cleaning the furnace and flues, requires less attention than soft coal, and gives a uniform temperature in the house. But it does take up more room in the cellar and requires more attention than anthracite. Some anthracite householders may find it necessary, however, to burn soft coal. Only small quantities should be fired at one time. Care should be taken not to cover the entire surface of the burning coal with fresh coal. If the entire surface is covered at one time, the gases are driven off from the fresh coal, but there is not enough heat to burn them and they are lost up the smoke pipe. In some sections, especially in rural regions, there is plenty of wood which can be used to advantage and can be burned in coal stoves and furnaces with a few minor changes which are easily made. The simplest way to use wood in a coal furnace, however, and the most effective in producing heat, is to combine it with coal. One-quarter to half of the coal ordinarily used can be saved by substitution of wood in this way. Any kind or size of wood can be used that will go into the fire pot, and will burn with good efficiency when surrounded with coal. With enormous supplies of wood widely distributed over much of the United States, especially the eastern half, there is no excuse for suffering because of inability to get coal. And the wide-spread use of wood for fuel, if only such wood as is best fitted for this purpose be taken, will be of great benefit to our forests. Wood is especially good for the mild weather of early fall and spring. Oil is an emergency fuel only and useful only when it is possible to install the special equipment necessary to burn the liquid."

The daily press give prominence to a warning issued by the National Board of Underwriters as to the precautions which should be taken by the public in the use of bituminous coal, wood, kerosene and electrical appliances as a substitute for anthracite. A statement issued by the board calls attention to the desirability of keeping any woodwork or wooden lath and plaster partitions at least four feet distant from the sides of a furnace and of encasing the furnace with an incombustible protective covering. Moreover:

"Since bituminous coal is subject to spontaneous ignition, particularly when stored in large quantities, it should never be piled near the furnace nor against a combustible surface, such as the wall of a wooden bin.

"One of the most important safety measures is to see that smokepipes and flues are thoroughly cleaned before the furnace is started. Soft coal burns more rapidly than anthracite and gives off considerably more flame and soot. Thus it increases the probability of a chimney fire where the flues are not attended to.

"The radiated heat from a smokepipe leading to the chimney

is also greater, under such circumstances, than when anthracite is burned, and this increases the chances of igniting the woodwork or other combustible material near by. The hazard will be particularly acute where furnaces are designed for the use of anthracite. The same precautions apply if wood is used.

"In communities where wooden shingle roofs prevail, numerous roof fires may be expected when soft coal and wood are employed in furnaces or grates because of the burning embers which will escape from the chimneys. Fires from defective chimneys and flues are also fairly certain to increase because of the greater heat generated by the substituted fuels mentioned, the larger amount of soot created and the embers given off.

"The coal shortage is likely to result in the freezing of many pipe-sprinkler systems, and consequently they should receive special attention."

In discussing the probable use of oil for heating houses, the statement says oil-burning equipments should be safeguarded in accordance with the rules of the Board of Fire Underwriters:

"While kerosene is not as hazardous as gasoline, it gives off inflammable vapors that are explosive under certain conditions.

"There is little doubt that the portable oil-stove will become a prominent household appliance in the near future, and its use should be attended with great care. Numerous fires have been caused by filling while the wick was lighted. All filling should be done by daylight and away from open fires and lights."

The board warns users of oil-stoves not to move them while lighted and to keep them away from inflammable household furnishings, such as curtains. Many explosions have been caused by defective wicks, the statement adds, and users are urged to care for the wicks properly to prevent the possibility of the flame getting into the oil reservoir.

In the use of portable gas and electric heaters, users are urged to keep them at a safe distance from wood construction or inflammable furnishings, and in the case of gas heaters, rigid iron piping instead of flexible tubing is advised for the connections.

"CIVILIZING" THE ESKIMOS

CHANGES IN THE CHARACTER of the Eskimos, due to their contact with white races, are described by Dr. W. E. Ekblaw, a geologist and botanist of the Crocker Expedition, in *Ecology* (Brooklyn). He gives a most interesting and instructive account of the Polar Eskimo, the most northern people of the world, a group of a few hundred persons that has maintained itself for a thousand years or more under the most adverse conditions, by complete adaptation to their environment. We quote an abstract from *Good Health* (Battle Creek, Mich.), whose editor, Dr. J. H. Kellogg, calls their association with whites "a great object lesson in race degeneracy." We read:

"Recent contact with the white race is changing the Eskimo's mode of life, his culture, his character, so that they are no longer solely the effect of his environment. The introduction of lumber and iron has improved his sledge so that he can travel farther. The primus stove and Standard Oil Company kerosene have further extended his activities and his range of travel. Rifles and ammunition have transformed his hunting methods and increased his stores of food, clothing and fuel, and made hunting and living easier. Needles, and thread, and cloth, and cooking implements have immeasurably aided the Eskimo women. Tea, coffee and tobacco are insidiously weakening the Eskimo physique. By contact with foreigners the Eskimo is losing his native honesty, independence and sterling character. He is changing so fast that in another decade or two he will be quite another person. His direct relationship to his homeland will be lost and his dependence upon the exterior world finally established. The demoralization of the Polar Eskimo as a distinct social unit is imminent and inevitable."

In Dr. Kellogg's belief, if "our highly intelligent American citizens' continue to use tea, coffee, and tobacco, we shall 'suffer ultimately the same degenerating effects that our remote cousins of the Arctic are undergoing."

RADIO • DEPARTMENT

ETHER WAVES VERSUS CRIME WAVES

TO THE AMATEUR ENTHUSIAST it has seemed that the authorities were singularly slow to take advantage of the very obvious potentialities of radio as a regular

police equipment. Not that the opportunities have been entirely overlooked. There have been reports, notably from Chicago, of police automobiles equipped with radio outfits, but the photographs that accompanied the reports suggested a rather crude and makeshift effort; and it does not appear that anything like an adequate and comprehensive attempt to realize the full possibilities of the scientific application of the new art to the apprehension of the malefactor has elsewhere been made by the guardians of the law.

It appears, however, that the delay has not been due to lack of appreciation on the part of the authorities, but only to certain difficulties necessarily inherent in the introduction of a new method in a highly specialized organization. Now it would seem that these are by way of being overcome, and we learn that steps have been taken to make radio available as a regular part of the equipment of the metropolitan police force. The New York Times gives details of the important enterprise. We quote:

"A wireless broadcasting station of the latest type has been installed at Police Headquarters in this city, and within a few months the police boats, police inspection district headquarters and stations will be equipped with receiving sets, so that they may obtain early information on stolen automobiles and crimes

will be no interference whatever with the police broadcasting station.

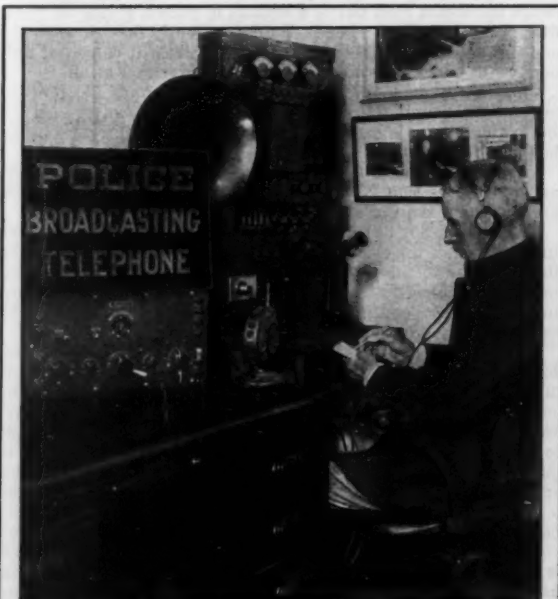
"A second set for the city is to be erected on the top of the Municipal Building by the Western Electric Company.



P. & A. photo.

CHICAGO POLICE AUTO WITH RADIO OUTFIT.

Talking with headquarters.



Kadel & Herbert photo.

BROADCASTING SET AT NEW YORK HEADQUARTERS.

and criminals. The Police Department has received the special permission of the Department of Commerce through Secretary Hoover to operate on a special wave length of 400 meters, a band not allocated to any one else, so that there

"Joseph A. Faurot, the famous finger-print expert, and Deputy Commissioner in charge of the New York police executive departments, inspected the new station yesterday and made some successful tests with the apparatus.

"If what Mr. Evans, the Western Electric engineer who is instructing our operators in the use of the equipment, states is true," Mr. Faurot said, "the Police Department will be able without any difficulty to cover an area of at least 30,000 square miles about this station. This should prove a great aid to us in running down stolen automobiles, locating missing persons, spreading alarms, and in all other work where secrecy is not an essential factor. Every amateur receiving station in a radius of at least 100 miles from the city will become a sort of police outpost, enabling us to spread emergency information at a much quicker rate than is now possible.

"M. R. Brennan, Superintendent of the Police Telegraph Division, who, with Commissioner Enright himself, was mainly influential in clearing the way for the installation of the station, explained some of the radio plans of the local department.

"We have already arranged with Mr. Hoover, Secretary of Commerce, for a special wave length for exclusive police purposes," he said. "The fact that there can be no delay in the dissemination of police news makes it out of the question for us to take any chances on being interfered with by the commercial broadcasting stations.

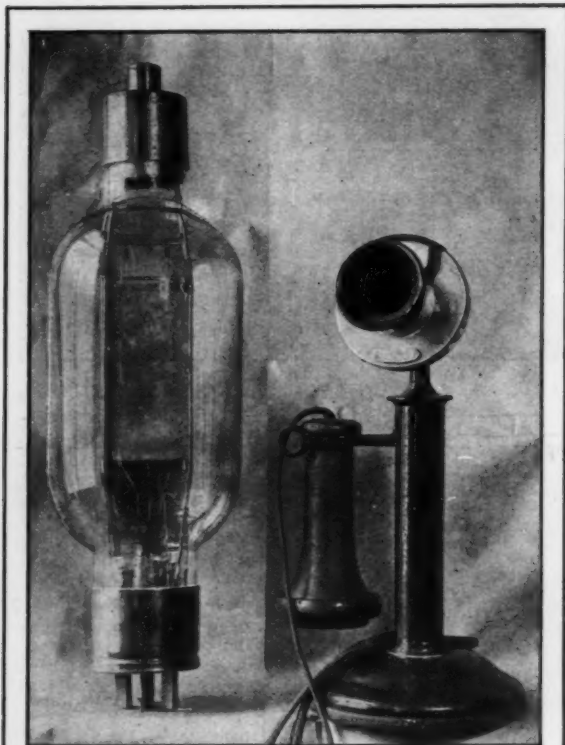
"Mr. Hoover, who recalled how the New York department was the first to make a success of radio telegraphy for police work some years ago, has been quick to realize our position and has authorized us to send on a 400-meter wave length. Later, if it becomes necessary for the Department of Commerce to allow wider scope to any of the present users of the 360-meter wave length, it has been agreed that we will widen our range to 500 meters.

"We have already made arrangements," Mr. Brennan said, "to equip our police boats and inspection district offices with radio telephonic receiving sets. As we progress with the idea, receiving stations will be installed in all precinct headquarters and special operators will be detailed to attend them twenty-four hours a day. When the other large cities take to radio telephony for administrative purposes, we expect to be able to establish a network of broadcasting and receiving stations that will make it possible to give a national alarm almost instantaneously."

RADIO EXPLAINS SQUEALING BRAKES

WHY DO THE BRAKES of a train squeal? The driver can not possibly vibrate the brakes the thousands of times a second necessary to create the sound waves which we hear. Middle C on a violin string sends vibrations past our ears at 256 waves a second, while the violinist's arm exerts only a uniform pull on the string. We take for granted the oscillations of a balance wheel of a watch against the steady pull of the main spring, or the fluttering of a flag in a steady breeze, though we may be unable to really understand either one.

From a rather unexpected source—radio, comes an explanation of such phenomena. In *Popular Radio* (New York) Professor



ONE OF THE NEW GIANT AUDIONS.

The telephone instrument is for comparison, to show the size.

J. H. Morecroft describes the action of the three-electrode vacuum-tube, or triode, when used as a detector or amplifier, in a way to make clear many other things as well.

Every radio operator who likes to understand "how the wheels go round" will find the presentation worth attentive following:

"The vacuum tube is a device which, by a peculiar action, can take continuous (or direct) current power from a battery or generator and transform part of it into alternating current power. The frequency of the power generated by the oscillating tube is determined entirely by the electrical constants of the circuit; the amount of power it is possible to generate is determined primarily by the size of the filament and plates of the tube, and secondarily by the adjustment of the circuits.

"To any one at all familiar with the ordinary laws of the electrical circuit it will seem strange that a source of continuous power supply can, by means of such a device, be changed to an alternating current power supply. The ordinary laws of electrical circuits seem to prohibit just such an occurrence. If we have a generator that gives a continuous voltage and we connect a circuit of any kind to the terminals of this generator we expect to get a flow of continuous current, and practically always we do so. How, then, is it that the vacuum tube, or triode, as it is

gradually being renamed, can transform such a continuous energy flow into an alternating energy flow?

"It is first to be pointed out that there are many occurrences in our every-day life where just such phenomena are taking place, yet we scarcely notice them—occurrences in which a simple, straightforward push or pull makes something vibrate backwards and forwards. In fact, it seems likely that the present popular study of radio, including such things as the triode, will react to make us observe more closely many of the ordinary events that take place around us, which we do not understand and which have many points of similarity with radio. The oscillating triode certainly has a place in this category; an attempt to understand its action will surely make us pay closer attention to many events taking place around us which we have never questioned, altho we have understood them no better than we understand the triode.

"Every one who has studied physics in high school knows that sound is a to-and-fro motion in the air, that it is a vibratory action in which energy flows past the ears at a non-uniform rate; the flow of energy goes from a maximum to zero with a frequency depending upon the musical pitch of the note. Thus the sound from a violin string, giving the middle C, is really caused by a compression and rarefaction wave in the air which sends energy past our ears in the form of 'pulses' at a regular rate of 256 a second. The question should occur to any one who hears such sound: how can the man's arm, which is evidently exerting a uniform pull on the violin bow, send off energy at the rate of 256 pulses a second? Certainly the man's muscles are not causing the phenomenon directly.

"The answer to this question, altho the phenomenon is a common one, is not simple; it can probably be accurately given by no one who reads this article. The question has probably not even occurred to any one of them, yet we frequently hear nowadays the question: 'What makes a triode oscillate?' It is a case of the unusual; the violin string is so simple that every one thinks he knows how it works. But the vacuum tube seems much more complicated in its action. As a matter of fact it is easier to get an exact solution of the action of the triode than of the violin string.

"What makes the brakes of a train or automobile give off such a shrill squeal when they are suddenly applied? Does the driver actually vibrate the brake shoe thousands of times a second? Evidently not. What makes the balance wheel of a watch continually oscillate back and forth when the mainspring is evidently trying always to push it in the same direction? What makes the steam rush out of a whistle in pulses, giving off high-pitched musical notes when it could apparently flow through the hole through which it is escaping more easily if it came out uniformly—in which case no sound would be given off at all?

"Will a toy balloon, towed behind an automobile, proceed uniformly through the air or will it vibrate sideways, even tho the towing string is exerting a uniform pull? Why does a flag flutter in the breeze?

"These cases could be multiplied without number; it seems in many instances that Nature would rather do things in an oscillatory fashion than in a straightforward fashion.

"We should not be surprised therefore, in view of the actions just outlined, if the electrons in the triode, on their way from the filament over to the plate, may be made by certain circuit connections to proceed at a variable periodic rate rather than flow uniformly as the continuous current generator or battery in the plate circuit tends to make them do.

"The plate circuit generator with its associated choke coil delivers a continuous flow of energy; this energy coming to the tube may be partly used up in the tube and partly flow on to the output circuit, which is the place where the high frequency power oscillations are started. The oscillating circuit may be made to act on the tube, so that the energy is supplied to the circuit in pulses, thus serving to keep it continually in oscillation. This action is much the same as in the escapement of a watch, which lets energy flow into the balance wheel in pulses—the pulses being so timed as to maintain the oscillatory motion of the wheel.

"The period, or frequency of oscillation of the balance wheel, is fixed by the effective mass of the wheel and the size of spring used; shortening the spring will increase the frequency and lengthening the spring will lower the frequency. This is what is accomplished by the 'faster' and the 'slower' adjustment of your watch.

"As the electrical constants of the oscillating circuit determine the frequency of the alternating current that is generated, it might be presumed that any frequency could be generated at will. Such is nearly the case. With one of the ordinary tubes obtainable for small transmitters the writer has produced fre-

quencies as low as one cycle a second by use of large inductances and condensers, whereas the same tube with the smallest inductances and condensers feasible has generated ten million cycles a second. These are not necessarily limits; it is possible for one who has large and efficient coils to go lower than one a second, and by using proper care in the selection and arrangement of the apparatus the upper frequency can be pushed as high as three hundred million cycles per second—a wide enough frequency range to suit almost every one!"

MICA FOR THE HEAD PHONES

THE AVERAGE AMATEUR knows a great deal about the essential mechanisms of his radio outfit, from antenna to triode. But he probably pays less attention to the telephone than to any other part of the apparatus. What does he know, for example, about the mica diaphragm, except that it is a thing of high repute? Very little, probably. Wherefore, it is of interest to reproduce from the *Radio Dealer* (New York) an account by Mr. R. P. Clarkson of the origin and manner of handling of the unique material which has the property of vibrating in a way to reproduce sound waves more satisfactorily than any substitute material hitherto discovered. Says Mr. Clarkson:

"In far-off India, 300 to 400 feet below the surface coolies are working to make your radio set more perfect. There is no modern machinery there, but piece by piece these natives dig the rock from which we get the famous bell-tone India ruby mica for all our mica diaphragms for radio head-sets. Not even blasting is used. A fire is built on the surface of the rock and as soon as it is heated, water is thrown on and the rock is cracked, then iron wedges are driven into the cracks breaking up the rock. These broken pieces and the waste are then passed from hand to hand along a line of coolies and women extending through narrow passages and up rude bamboo ladders until the surface is reached.

"Very little of the mica rock that comes to the ground can be used for diaphragms. In some sections not more than a pound or two to the ton of rock can be trimmed into sheets, and not more than twenty per cent. of that can pass the tests given in laboratories for microphone diaphragms. Much of the rest can be made into punchings of various kinds, such as for magneto armatures. Some can be used for transmitter diaphragms in the ordinary house telephone. Much of it in small pieces is used for the best fixt condensers.

"Mica must not be confused with isinglass. Mica is a mineral found in many parts of the world, the bulk of commercial mica coming from India, Africa, Canada and the United States. Isinglass, on the other hand, is a manufactured product of no value in radio. It is made from the air bladders of certain fish and is both soluble and combustible. Mica, altho not very hard by scratch tests, is extremely durable, so durable, in fact, that when granite decomposes the mica particles still remain resistant long after the rest has decomposed. In elasticity, toughness, flexibility, transparency, high electrical strength, resistance to high heat and temperature changes, and resistance to weather, there is no substance known which approaches mica even closely enough to be known as a substitute.

"Not all mica has these properties to an equal degree. There are micas and other micas. In general, for diaphragm purposes, there is little domestic mica of value. All first-class clear ruby diaphragms must be of India mica, altho the South African green mica is splendid for this purpose, but is objected to by many because of the darker color.

"The manufacture of phone mica diaphragms is in itself a considerable task. Stamping is impossible because the die or punch will ruffle up the layers of mica at the edge of the mica disc and spoil the resonant character of the diaphragm. Each piece must be carefully turned, and this is hand work, very slow and laborious. A number of squares of the superfine ruby bell-tone mica are stacked together, interleaved with soft tissue-paper to keep the mica from scratching and also to furnish a friction between the sheets. Mica is naturally highly polished

when split, and this polish is retained. The squares are clamped together and turned down to the size desired. Only a single cut can be taken with any one tool without resharpening. A final finishing cut in oil is sometimes given to get a perfect edge and remove all dust and powder.

"These turned discs ranging from four thousandths to twelve thousandths of an inch in thickness are then clamped in a drilling jig and by special means employing a peculiar type of drill, the center holes are drilled. The completed discs are then inspected and separated into grades.

"Of course, mica is not magnetic, so a magnetic material must be added to the mica disc before the diaphragm is of any value commercially for head sets. This, too, is a delicate hand job. The little round armature that is added must be of a certain iron, a certain carefully determined weight and thickness, and of a proper diameter. It must be balanced at the center of the mica disc and still must be spaced from the mica just so far to



Courtesy of "Popular Radio."

HE EXPLAINS THE TRIODE.

Professor Morecroft of Columbia University.

give perfect results. Then the mica disc and the armature must be firmly fastened together so there can be no possibility of any loosening under the most severe loud speaker use, and yet care must be taken not to crush the mica even the slightest amount, or the tone is ruined.

"The complete microphone mica diaphragm is unique in that the entire pull of both receiver magnets is transferred to the exact center point of the diaphragm so that a true diaphragm vibration is permitted, sound waves being given off without interference.

"We have often been asked how large a diaphragm it is possible to get. The largest we have ever made in commercial quantities is three inches in diameter and about 14 thousandths of an inch thick. It would be possible to make diaphragms in limited quantities twice this size, but the cost would be extremely high. The largest feasible size when large quantities is considered is about 2 3/4 to 2 3/4 inches in diameter. The smallest size—1 3/4 inches—is by far the most popular.

"Very little theory is known concerning diaphragm action, and it is largely by constant experimentation that any advance is made. The United States Bureau of Standards are now at work on elaborate methods for testing head-sets, and among other things have found that no pair of phones can be matched at the factory. They must be matched at the receiver's radio set under the conditions of use. On one well-known make of phones tested it was found that if they were perfectly matched at an audio frequency of 1,200 cycles they would gradually grow apart as the frequency was lessened until at 500 cycles one phone was twice as loud as the other. That is the reason why we supply a spacing ring with each microphone mica diaphragm. The user may from time to time adjust his diaphragms. Ultimately he will make no changes and after a slight period of use the diaphragms will 'wear in' and give a clearness, tone and general audibility that he has never before heard with all interfering noises cut out or softened so they are not noticeable."

LETTERS - AND - ART

LITERATURE DRAMA MUSIC FINE-ARTS EDUCATION CULTURE

ART DISCOVERS JOHN LILLIE

WITH A SHAVING-BRUSH, an assortment of house-paints, and no training, a Jack-of-all-trades in Dorset, Vermont, address himself to the smooth side of an old board one morning several years ago, and produced a charming landscape, tho he had never seen an oil painting until that summer. He had seen mountains all his life, however, and loved them. As carpenter, mason, plumber, and what not, he had developed a high degree of manual skill. So, when it came to recording his impressions of nature, they were matured impressions, while the hand that recorded them was nothing if not versatile. And yet it is with astonishment that painters view his pictures, a group of which have recently been exhibited in Dorset, where Zephine Humphrey has studied them for the *Outlook*. Of the mountain artist and his work, she tells us:

"Some years ago a number of landscape painters came to the valley and took board in the family of a craftsman named John Lillie. They were an enthusiastic, industrious lot, and they soon filled the carriage-house of their host's big barn with sketches and canvases. Also they were genially friendly, as painters are apt to be, and established the happiest relations with their host himself.

"They found him a thoughtful, intelligent man, with a strong, rather rugged face and meditative blue eyes. As carpenter, mason, and plumber he had been in demand ever since he could remember, and the quality of his work was renowned through the neighborhood. Especially was he valued by the 'summer people' who were coming into the valley, and who wanted their houses built or remodeled skilfully. He had an instinctive eye and touch for the finely harmonious.

"His love for his native mountains commended him particularly to the painters who sojourned with him. He seemed to know all about the hills, just where to go for their noblest views, just what atmospheric conditions would make them look most beautiful; and he was never too busy to stop and stand gazing off at them. The interest was unusual. Most Vermonters take the loveliness of their environment pretty much for granted.

"Until the summer of which I am speaking he had never seen an oil painting, and he was immensely interested in the productions that piled up in his carriage-house. Feeling himself not unwelcome, he spent a good deal of time with his boarders, watching them at their work and pondering. Finally, one day, when they were all off at a safe distance on the mountainside, and he was securely alone, he got out an assortment of house paints for which he happened to be an agent, made a selection of house-painter's brushes, augmented by a shaving-brush, found a smooth, thin strip of board, and went to work. When

he had finished, he hung his picture, a narrow, oblong panel, beside the others on the wall of the carriage-house.

"The next morning there was great excitement among the landscape painters. 'Who in thunder painted that?' the chief of them demanded. 'Not I.' 'No, nor I.' 'Of course not!' exploded the chief. 'You couldn't. That begins where you leave off.' It was not very long before their host was found and, being challenged with questions, made his surprising confession, and then—well, one can better imagine than describe the sensation he caused. For, indeed, his entirely unprecedented picture betrayed great and mature ability."

This was the beginning, and Lillie's artist friends took care not to offer him counsel. "Hands off!" was "the instinctive slogan in the face of the miracle that had been worked among them." Other miracles followed, we are told:

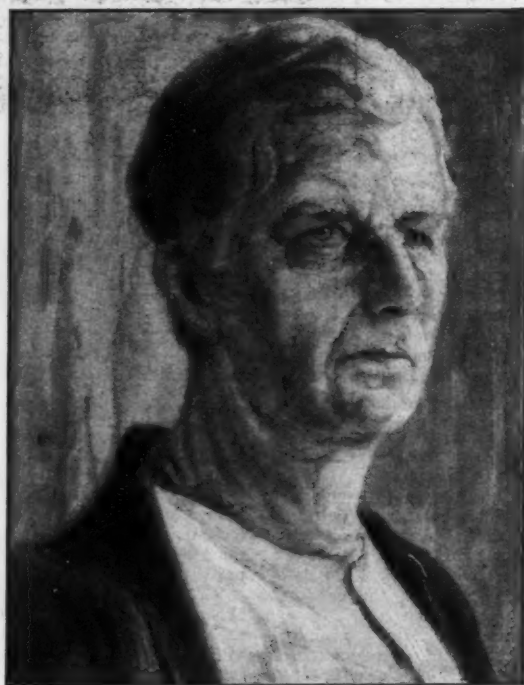
"Suddenly, without any effort, he painted landscapes as if he had spent his life doing nothing else. In the autumn the painters gave an exhibition in a studio in the village, and John Lillie had more canvases hung than any one.

"During the following winter he made his first—and, up to the present writing, his only—trip to New York. He was invited by his painter friends, and by them was taken to the current exhibitions and the Metropolitan Museum. His judgment was unerring. He knew how to go straight to the best picture on a wall and how to point out its peculiar excellence. He was quite unswayed by the opinions of others, altho he listened respectfully to them. He knew what he knew, why he knew it, and

how to abide by it. When he came back to the winter valley (and he was very glad to get back) he had a store of impressions, some of which he cherished and many of which he let slip.

"After that for a long time nothing particular happened. The landscape painters did not return to the valley and the local excitement over John Lillie's pictures died down. It had never been an altogether sympathetic excitement, anyway, so far as his fellow townsmen were concerned. Picture-making seemed a childish waste of time to most of them, especially when a man was skilled in a useful craft and had a family to support. Summer homes increased, and John Lillie had all he could do planning and building and remodeling. Gradually his brief burst of landscape painting came to seem to his neighbors a unique, amazing episode.

"Not to him, however. No, altho he loved his craft and reveled in the beauty of the fine old houses which he was asked to reclaim, he never forgot the greater joy of the creative impulse he had known. When such an impulse once grips a man it never lets him go. Little by little, during the long winters and when at times work was slack in the summer, John Lillie accumulated



JOHN LILLIE.

Carpenter, mason, plumber, and now artist.

a store of canvases which he kept in his hen-house, and concerning which he mostly held his peace. Now and then, when the thrill of catching some particularly lovely effect was unendurable, he tried to share it with a neighbor; but the neighbor did not always understand—as why, indeed, should he? So he said less and less and went his hidden way. If it had not been for the coming of yet another landscape painter to the valley last autumn, the hen-house might have kept its secrets.

"But when the landscape painter did come! He was a temperamental soul, and, as the vivid phrase runs, he went right up in the air. 'Why, this is a genius you have in your midst!' he scolded the valley folk. 'What do you mean by asking him to come and mend your kitchen sinks? Kitchen sinks! John Lillie! I tell you, we're none of us fit to wash his brushes for him.'

"Of course it was extravagant, but it was immensely effective in waking the valley up, and soon John Lillie's name was on every lip and all the lingering summer people who cared anything about pictures were making pilgrimages to the Lillie hen-house. John Lillie received them cordially, not in the least bewildered by the sudden limelight which had been turned on him, not too much elated, but very truly pleased and gratified. The artist paints his pictures for himself and something outside him which we may as well call God; but the sympathetic approval of his fellow-man is needed to make the trinity complete. On the outer wall of the hen-house, against the soft gray background of unpainted boards, he slipt canvas after canvas into a studio frame which had been given to him. In the clear autumn light the paintings showed to great advantage.

"They were strange pictures. On general principles, one would have expected an untrained painter to see and reproduce things photographically. But Lillie's Dorset was not at all the Dorset of his neighbors and of most of the summer people. It was a big, elemental world, simple, rather bare, sometimes austere, sometimes instinct with a poignant loveliness, always high and remote and full of romance. In the significant words of the landscape painter who had unearthed them, his pictures had 'the unreality of all great things.' One of the canvases held nothing but the golden crest of a big, bare autumn hill against a gray sky. Not a bush, not even a rock broke the noble curve, and only a faint rift in one corner broke the monotony of the sky. Yet it was a picture which one could ponder and search indefinitely. Another showed a white winter world, blurred and indistinct, with a thin line of wind-blown trees staggering across it. All the pictures had mystery and imagination."

The *Outlook's* contributor appears to believe that the world at large will recognize in John Lillie an important figure—

"But, whatever may or may not happen, this is sure: that the inhabitants of Dorset have been stirred and roused by a gust of that wayward spirit that bloweth where it listeth; whence it comes and whither it goes no man can tell. Like John Keats, like Walt Whitman, John Lillie has been singled out for a mysterious, unprepared visitation, and all who know him are the more thoughtful and reverent for the experience."

Is this enthusiastic estimate of John Lillie and his work perhaps the result, merely, of thrills attending discovery? One wishes to know what less excited critics think of Lillie and what the dealers think. In other words, one inquires whether his pictures are interesting and delightful, in and of themselves? We read:

"The visiting landscape painter went back to New York and talked so convincingly to one of the Fifth Avenue picture dealers that the latter sent for a number of Lillie's canvases and kept five of them to show his patrons. The rest were taken by a young lawyer and his wife who lived in the East Seventies, and who set aside one of their big rooms to serve as a gallery during the season. Three of these pictures were sold."

STUDENT VIEWS OF THE JEWS AT HARVARD

"HARVARD ASKS RACE and Color of New Students—Revised Admission Blank Also Calls for Father's Birthplace and Whether Name Has Been Changed—Jews Consider It a Ban—University Authorities Insist No Race Is Aimed At; Seek Information." So run the headlines of a special dispatch from Cambridge to the *New York Tribune* regarding developments that draw attention afresh to an article



LILLIE'S FIRST PICTURE.

Painted with a shaving-brush on the smooth side of a board.

recently contributed to the *New York Nation* by Mr. William T. Ham, who writes of student sentiment in the matter of opening the university doors to Jews.

Very fittingly, it was in the class in Social Ethics at Harvard that opinions were taken. Eighty-three students in the course were given by Prof. Richard C. Abbott the following question, and asked to discuss it "as fairly as you can": "For the good of all persons concerned, is a college ever ethically justified in limiting to a certain percentage the number of any particular race who are admitted to the freshman class each year?" As Mr. Ham tells us, "forty-one believed in the justice of a policy of race-limitation under certain circumstances. Thirty-four held that such a policy was never justified. Eight stayed on the fence." In the last group one name was Jewish. Seven opposing restriction had Jewish names. All who favored it were gentiles. Most of the restrictionists took the ground, already argued against Jews, that if a college "becomes topheavy from an oversupply of some one race, it serves neither that race nor America." Some few maintained that "a college is a private institution and can sell its goods or not, as it sees fit, to whomever it pleases." But for the most part the restrictionists agreed that "while the endowed college is a private corporation it has a public function, recognized by the State." The point emphasized was that "the Jews tend to overrun the college, to spoil it for the native-born Anglo-Saxon young persons for whom it was built and whom it really wants." Mr. Ham condenses the answers to the question why the presence of the Jew is so inimical to the "highly desirable 'atmosphere' that is the cynosure of endowment-givers and their sons," and we read that—

"One accusation has to do with scholarship. 'In harmony with their policy of getting all they can for as little as possible, Jews incidentally take a majority of the scholarships. Thus they deprive many worthy men of other races of a chance.' Here, however, we must discriminate. There is diversity of opinion as to the intellectual powers of the Jew. A considerable number of our gentlemen deny that he is, on the average, more able mentally than his critics. 'He does nothing but grind. Is it surprising that he should make better grades than those of us who have broader interests?' One aggrieved individual who drew a rock-bottom grade in the examination exclaims bitterly: 'They memorize their books! Thus they keep the average of

scholarship so high that others with a high degree of common sense, but less parrot-knowledge, are prevented from attaining a representative grade."

This view is offset by those who admit that "on the average the Hebrews are brighter than the rest of us," and if they do not do much socially, they serve the University—by keeping up the intellectual standards. One of the more careful students, we are told, differentiates between two general types of Hebrews:

"(1) 'Those who, with the Chinese, are the intellectual leaders of all universities, who have grown beyond a particular race, being of universal intellect, and (2) those who are domineering, eager for advancement, pushing, disliked even by other members of their own race.' He remarks further: 'To deal with them, a college must follow a policy of elastic limitation, one which allows for differences, because,' says he, 'it must be granted that the fact that the Puritans arrived first and stole the land from

other until he proves himself worse.' 'A college should be the home of tolerance, of which racial restrictions are the spiritual negation.'

"To maintain that a race is inferior is nothing short of ridiculous," says the Jewish student from whom I shall quote this once. 'Inferior in what? In intellectual culture? Or merely in opportunity? Who can tell? Every race has its bad as well as its good. Each tends to consider itself superior because it excels in those things which it values. Often the excellence is more apparent than real.' In a number of papers the point is made that differences between individuals of the same race are greater than those between races. In short, the anti-restrictionists agree that 'objectionable individuals must be eliminated, not races. We must seek ability independent of race, as of sex.'

"If, under fair examinations, Jews predominate among the entrants, it can be due only to the laziness or lack of talent of those who fail. If Christians are unable to compete intellectually with Jews, if they fail to take the same advantage of their

opportunities, then the Christians should suffer, not the Jews. If the traditions of Harvard are not able to inspire us, her non-Jewish sons, to excel intellectually, then those traditions must go. They must not be used as a stone wall to protect the mental infants of the future from the incursions of a more enlightened alien race.'

"As to the desire of the restrictionists to keep the college fairly representative of the country at large, the answer is equally emphatic: 'An educational institution should not be representative of all people, but only of those with ambition and ability to do its work. This has nothing to do with race and religion.' 'To tell a Cohen, whose average on the college board examinations was 90, that he can not enter because there are too many Jews already, while a grade of 68 will pass a Murphy, or one of 62 a Morgan, hardly seems in line with the real interests of the college.'"



LILLIE "HAD KNOWN MOUNTAINS ALL HIS LIFE, AND LOVED THEM."

the Indians should give them no prior lien on Harvard Yard and its privileges.'

"A few of the restrictionists have a black outlook upon the racial question. 'Race prejudice,' avers one, 'is inevitable. All that we can do is to keep it at a minimum, and the best way to do that is to avoid contact that is irritating.' One gloomy youth says: 'College experience has magnified my race prejudice, because I have been brought into unpleasant relations with races that I did not know before.'"

In several papers Jews are "recommended to found colleges of their own." They "will have full freedom in a place populated by themselves."

When Mr. Ham turns to the views of those who oppose restriction, he omits, he says, save in one instance, the discussions of Jewish students:

"The only requisite for a college student should be the ability to pursue his studies with profit.' 'A college is founded on a basis of service to those who deserve it. The moment it is hinted that there is some other purpose more important than developing the intellect and character of the community, the college assumes a new and lesser rôle.' 'Certainly the aim of an educational institution is not to be a desirable collection of pleasing people.'

"Every applicant, it is contended, 'should have the opportunity to prove his individual worth.' 'One man is as good as an-

is made by Madame Tetrassini in her new book, "My Life of Song" (Dorrance, \$4.00). Has coloratura vanished forever, or may we expect that some day a new Donizetti will arise? Says Tetrassini:

"What of the future of coloratura music, the music of runs, and trills and melody, through which I have become known to the world? This music is no longer being written, singers no longer study it—yet people crowd to hear it. We are told that it is of the past, that it is dying or dead. The critics and the people that go to opera talk of the modern music of France, Germany and Italy. But I do not believe that this older style of music will die. No, it can not die. For is it not natural music, the music of the birds?

"And do the admirers of the very modern music really know how great is this old Italian music? It is not a matter of the frills and trills—these things are easy to write, and they do not make music; they are but the froth on the champagne. It takes a great master to write this music, tho it seems so simple in comparison with the modern operatic compositions. The composers of this old school—Donizetti and Rossini, for instance—wrote especially for the voice as for an instrument, but Richard Strauss certainly did not write for the voice. The day will come, however, when there will be born another Donizetti. Then coloratura music will take a new lease of life. It may be that one or two great coloratura singers may first arise so as to inspire the new Donizetti. Yet he will come, and the world will assuredly welcome his advent."

MUST COLORATURA DIE?—

An eloquent plea, for the now old-fashioned Italian music of melody and trill and rippling run



"THE HIGHEST ATTAINMENT OF EARLY INDIAN ART."

The "Piasa petroglyph" as figured by Russell (left) and by McAdams (right).

THE MISSISSIPPI DRAGONS

TWO DEVIL-LIKE MONSTERS with outspread wings, carved and painted on the smooth face of a bluff eighty feet above the Mississippi at Alton, Ill., astonished the French explorers Joliet and Marquette, and constituted what is known as the "Piasa petroglyph," said to have been "the highest attainment of early Indian pictorial art." Not a trace remains. What was this famous petroglyph? How came it there? What did it mean? Writing from Princeton University, Mr. Tom English tells us in *Art and Archeology*:

"In June, 1673, Joliet the adventurous trader and Marquette the devoted priest saw it as they passed down on their voyage of exploration. Père Marquette's account is as follows:

"As we coasted along rocks, frightful for their height and length, we saw two monsters painted on one of these rocks, which startled us at first, and on which the boldest Indian dare not gaze long. They are as large as a calf, with horns on the head like a deer, a fearful look, red eyes, bearded like a tiger, the face somewhat like a man's, the body covered with scales, and the tail so long that it twice makes a turn of the body, passing over the head and down between the legs, and ending at last in a fish's tail. Green, red, and a kind of black, are the colors employed. On the whole, the two monsters are so well painted, that we could not believe any Indian to have been the designer; as good painters in France would find it hard to do as well; besides this, they are so high up on the rock that it is hard to get conveniently at them to paint them."

The dragons were still visible in 1849, but in 1856 or '57, limestone makers quarried back into the bluff and the picture was destroyed, and the two drawings we have of it were made by artists who followed descriptions. "They differ mainly in details of horns and tail," comments Mr. English, adding, "Certainly there are irreconcilable discrepancies between the various descriptions." It seems that the tradition exists in two forms:

"One legend relates that in the days when the Illini confederacy held all the territory between the Mississippi and Wabash Rivers, a deadly feud sprang up between the powerful tribes, the Mestehagames (or Miehagames) and the Miamis. The town of the former was near the mouth of the Illinois River, while the latter's was on the site of the present city of Alton. Between the two was a narrow ravine, in which had dwelt for a long time two huge and hideous monsters, compounded of beast, bird, and serpent, which, as they had never molested the Indians, were left undisturbed by them. The hatred of the Miamis for the Mestehagames increasing daily, the former decided to surprise and annihilate their enemies. The Mestehagames at the same time formed a similar plan, and the warriors of both tribes setting out one morning to attack the other's town before day-break, they met in the ravine of the Piasas. When the foes were brought face to face in the narrow pass, they at once fell to deadly combat. While the equal fight was raging, a frightful noise was heard overhead, and looking up they beheld the Piasas flying down the gorge. With horrid roars and screams they

swooped down over the combatants, and each seizing a Miami chieftain in its talons, they flew off. The Mestehagames, assured that the devourer birds were sent to their aid by the Great Spirit, fell with augmented bravery upon the dismayed Miamis. They drove great numbers into the river, where they were drowned, and massacred many others, the wretched survivors fleeing beyond the Wabash.

"Many years later, when the Miamis had settled their score with the Mestehagames, at Starved Rock on the Illinois, they returned to the bluffs, and found representations of the Piasas engraved on their face. Since they could not reach the pictures to erase them, they discharged their arrows at them whenever they passed by in their canoes."

The Illini tradition, Mr. English points out, differs completely from that of the Miamis:

"It relates that at a time when the greatness of the Illini justified their name, which means 'real men,' a winged monster came to make its lair on the bluffs, of fearful appearance, and so large and powerful that it could seize and carry off in its talons a full-grown deer. Having by some mischance once tasted human flesh, it preyed thereafter on the people, so that villages were depopulated, and no one was ever free from fear. At length, Ouatogo, a great and good chief of the Illini, sought by fasting and prayer to learn from the Great Spirit how the monster might be destroyed. On the thirtieth night, the Great Spirit appeared to Ouatogo in his solitude, and directed him to select from the tribe the noblest warrior. He should be placed on a height above the river as a sacrifice to the Piasa, while twenty braves concealed in ambush should be ready to send their arrows into the monster's body as it descended upon its prey. Ouatogo gave thanks that a plan of deliverance was granted his people, and offered himself as the victim. He stationed the braves about the base of the cliff, and himself stood on the height. He had not long to wait before the devourer saw him and circled down from the clouds. Ouatogo awaited his fate with calm brow, chanting his death song. Just as the Piasa would have grasped him in its claws, poisoned arrows from twenty bow-strings pierced its breast, and with a wild scream it fell dead. When his warriors reached the summit they found their chief unhurt. Then was there rejoicing throughout all the villages of the Illini, and in memory of their deliverance the figure of the Piasa was painted on the face of the bluff where it was slain."

What are a modern archeologist's views as to the Piasa's meaning? Says Mr. English:

"I think we may quite simply and surely explain it as a version of the thunder-bird legend, found among all the tribes of Algonkin stock, and widely distributed among the North American Indians. According to this myth, the thunderstorm is caused by a great bird darkening the sky with its shadow. The thunder is the sound of the flapping of its wings, the lightning flash is the winking of its red eyes, and the lightning stroke the grasp of its talons. Therefore the Piasa's spreading wings, red eyes, and eagle-claws. The lightning is further represented by the horns, tail, and the serrations of its neck and wings. Undoubtedly the legends may be roughly worked out on the basis of this explanation, and thus this masterpiece of aboriginal art may come to possess a real significance."

RELIGION-AND-SOCIAL-SERVICE

THE "ANGEL OF DISCORD" AT SMYRNA

GLADSTONE'S DREAM of righting the great wrongs done to the Christian minorities of the Near East has vanished, many fear, in the smoke of Smyrna, and the latest destruction and massacres committed by the Turks are on so vast a scale, says a newspaper correspondent, that only the collective efforts of the Allied nations can cope with the catastrophe. According with this view, President Harding has recommended to the Senate an emergency appropriation of \$200,000 for 1,000 Americans in need, and the great charity organizations of the country are pooling their resources to aid all the stricken peoples whose tragedy has appalled the world. The story of Smyrna, says the *Buffalo Express*, "is the story of the Bulgarian massacre of 1876 repeated, of the Armenian massacres of 1915-16, of the Greek massacres of a century ago, and of innumerable other massacres charged to the Turks. The Turk has been doing these things ever since he became a political power."

But the latest harvest of death and destruction reaped by the Turks after their victory over the Greeks is by all accounts the most terrible, and how immediate and urgent is the need for relief of the refugees is narrated in cablegrams which have been pouring into this country since the fall of Smyrna. The city is now a vast sepulcher of ashes, says one of these dispatches, only the blackened walls of 25,000 homes and the charred bodies of countless victims remaining to tell the story of death and destruction unexampled in modern history. After thousands were put to the sword a quarter of a million people were driven to the water's edge, where, exposed to death by drowning, cremation, or massacre, they besought help from the ships in the harbor. American, British, French and Italian ships saved a few of the refugees, but it was impossible even to attempt the rescue of the vast majority, and, according to latest advices, many of them were driven into the interior, whence none of them is expected to return.

While the accounts generally charge the Turks with setting

fire to the city, it is said in their behalf that their entrance was well disciplined, and that they even rendered assistance to Greek and Armenian wounded until fired upon by Greek citizens alleged to have been armed by the Greek authorities. All kinds of stories of Turkish atrocities reached the American consulate and the American naval commander, says Mark O. Prentiss,

special representative of the Near East Relief in Smyrna, in a dispatch to the *New York Times*, and "each story was promptly investigated and none was confirmed." After noticing that Turkish officers were giving food and water to dying Armenians and Greeks, says Mr. Prentiss, "every one felt the Turks intended to establish a new record for military occupation without massacre." Later, however, looting and indiscriminate shooting began, the Turkish soldiers took their revenge for atrocities alleged to have been committed on their countrymen, and there intervened an orgy of bloodshed and pillage before which the senses failed. "I have seen sights," says Mr. Prentiss, "until my senses are numb, but the sight of 200,000 people, mostly women and little children, being penned up and burning, and those escaping being driven to a barren, devastated country for starvation, is past all comprehension." Ac-



Photos from the Keystone View Company.

Y. W. C. A. WORKERS WHO FACED THE FURY OF THE TURKS.

Undaunted by the destroyers of Smyrna, Miss Jean Christie, first on the left, escorted 150 Armenian orphans to safety. The others are Miss Nancy McFarlan and Miss Margaret Forsyth.

cording to a cable message received by the New York headquarters of the Near East Relief from its managing director in the Levant, H. C. Jaquith, a thousand people perished in the fire, 200 of this number being hospital patients whom it was impossible to remove. The message recited that the relief supplies sent to Smyrna from Constantinople were lost in the fire, and states further: "All American business places and the Armenian and Greek Cathedrals were destroyed, and it is now confirmed by a reliable source that the Armenian Archbishop Touran and the Greek Metropolitan were executed."

All accounts of the rescue work in Smyrna during its harrowing experiences contain evidences of the notable part played by Americans in helping the stricken people. There is, for instance,

the story of Miss Jean Christie, of Springfield, Mass., director of the American Y. W. C. A., who personally conducted 150 Armenian orphans through the Turkish lines to the American steamship *Winona*. With Miss Myrtle Nolan, also an American, Miss Christie conducted a school for children, which was fired during the mêlée. High praise to his fellow citizens is also given by the American Consul General at Smyrna, George Horton. Though prevented by his position from giving an official interview, Mr. Horton told an Associated Press correspondent that it was his duty to speak of "the splendid heroism and self-sacrifice of the American colony in Smyrna." The Y. W. C. A. workers, he said, "refused point blank to leave their posts until driven out by the flames. Some are still there."

The situation is clearly beyond the scope of any private charity, all observers agree, and appeals in behalf of the sufferers have been laid before the governments of Europe, as well as before the Government of the United States, and before the League of Nations. At the behest of Dr. Fridtjof Nansen, High Commissioner of the International Commission for Russian Relief, the League of Nations has contributed \$20,000 and promised more for relief work. America is anxious to help, says Assistant Secretary of State Phillips in a cablegram to Admiral Bristol, "but feels the responsibility is clearly on the governments which have the equipment and the military and naval organizations on the ground that can be put to work at once." Without assuming any commitments in the name of his Government, Admiral Bristol is directed to join in any cooperative plan of relief. Emergency funds have been provided by the Near East Relief and the Red Cross amounting to \$50,000, \$25,000 from each organization. Among the first to contribute was the Jewish Joint Distribution Committee, which gave \$10,000 toward the relief fund. In announcing the contribution Felix Warburg, chairman of the Committee, states: "Altho this amount has just been forwarded to our representative in Constantinople to be used in any way he may see fit to relieve immediate suffering among the population of Smyrna, the Committee stands ready to join with other American organizations in furnishing comprehensive relief measures on a nonsectarian basis in the stricken districts." Other organizations cooperating are the Y. M. C. A., the Y. W. C. A., and the American Board of Foreign Missions. It is estimated, according to press reports, that from \$2,000,000 to \$3,000,000 will be needed for the work, and that the burning of Smyrna has added at least 200,000 refugees to the 350,000 made homeless by the Turks. The Near East Relief has sent out a nationwide appeal for the amount needed. "We can not hold aloof now as the price of destruction rises without assuming responsibility for conditions that will stagger the world and set back human progress for generations," says Dr. James L. Barton, Chairman of the Near East Relief. It is reliance upon dissension and antagonism among Christian powers that has led Mustapha Kemal to take the risk involved in turning over Smyrna to the unbridled lust of his soldiery, says *The Christian Science Monitor*, noting that the Turks' prayers to the "Angel of Discord" have been answered in a divided Christendom.

A WORLDWIDE NET FOR THE CRIMINAL

AMERICA'S UNENVIABLE DISTINCTION as holder of the world's record in crime inspires much interest in the proposed World Police Conference, the preliminary organization of which was recently instituted in New York at an international meeting of police officials. The organization, says the *New York Evening Post*, "is a logical step in an absolutely necessary development. An immediate result will be closer cooperation among police departments the world over. Eventually there may even be an international police headquarters that will oppose to the mobility of the modern crook all the resources of science and speed at the disposal of all governments." Representatives of 700 cities in this country, Canada, Cuba and Mexico, and high police officials of Europe attended the conference, and perfected plans for a standardization of methods of detection and mutual cooperation in a more vigilant war on criminals. Among the resolutions adopted was one regulating the manufacture of small arms, and placing it under government supervision. Under the terms of this resolution no small arms could be manufactured except for governmental or official use. As several speakers at the conference remarked, according to press reports, "our own War Department, by selling cheaply and to anybody willing to buy great quantities of the pistols of which it had more than our Army needs after the late war, in effect is arming our burglars and bandits and increasing the difficulties which our police encounter, as well as adding to the danger of the general public." Standardization of finger-printing records was also urged in another resolution.

The first step in the scheme for an international organization is the establishment of a National Police Bureau, with headquarters in Washington, to authorize which Senator Calder is expected to introduce a bill in December. Such a

bureau, writes Police Commissioner Richard E. Enright in the *New York Times*, "would mean that the movements of all criminals, in or out of prison, with their finger-prints, photographs, records, and complete history, would be on file in one central place, and the criminal would no longer be permitted to go from one city to another without proper notice from one Police Commissioner to another." The net thus tightened—

"The criminal would soon learn there was no escape from the police and that he could no longer hide after a job and come out when he thought it safe. If he was determined to go straight there would be nothing to deter him. Despite the assertions of reformers, the police are the reformed criminals' best friends, and they obtain more jobs for criminals who want to go straight than all the reform associations put together. An ounce of crime prevention is worth a pound of cure."

"The bureau will also collect valuable information in regard to the improvements of police work all over the world. Such improvements and innovations will be bulletined to every department in this country and abroad. It will keep the police of every city in the world abreast of the best police thought anywhere. As conditions are at present police heads learn by chance. There is at present no system for keeping them informed of new ideas in police work."

"A national bureau working in cooperation with similar bureaus in foreign countries could prevent the movement of criminal



FORAGING FOR SMYRNA.
H. C. Jaquith, director of the Near East Relief in the Levant.

anarchists to this country. These individuals would be known by numbers and would be carefully watched and their movements reported. When they changed their abode they would be kept under surveillance. If an anarchistic crime is committed, the police would then more definitely know where to go to round up the criminal anarchists."

While America is generally regarded as leading the world in crime, the discredit of domestic leadership, through an inaccurate compilation of statistics, has mistakenly been attributed to St. Louis. Wide publication has been given to the statement attributed to Judge William N. Gemmill, of Chicago, that St. Louis led all the cities of the United States in the number of murders and homicides. According to the statistics then cited, St. Louis in 1921 had fifty-three killings for every 100,000 inhabitants, or a total of 426. These figures are refuted by P. V. Bunn, General Secretary of the Chamber of Commerce of St. Louis. In a statement published in the *New York Times* Mr. Bunn says that Judge Gemmill did not use the figures attributed to him, and he proceeds: "The official facts are that there were a total of 139 homicides in St. Louis in 1921, of which 113 were murders. That makes a rate of only 14 per 100,000, which will compare favorably with any city in the country."

THE RECALL OF EVANGELINE BOOTH

AMERICA HAD VIRTUALLY ADOPTED Evangeline Booth, and it is with a feeling of regret that the press of the country generally views her recall to England, recently ordered by her brother, General Bramwell Booth, who succeeded his father as commander-in-chief of the Salvation Army. The recall of the head of the Salvation Army in America is said in press reports to be part of a plan to separate the business corporations from the command of the organization. Under this arrangement, the commissioners of the eastern, central and western districts, it is said, would be responsible directly to General Bramwell Booth in England, and Miss Booth's successor would be head of the business corporations. Involving, as it does, the removal of Commander Evangeline Booth, this plan is not well received in America, and General Bramwell Booth, says the *Philadelphia Public Ledger*, "evidently has no understanding of American sentiment, or else thinks it can be disregarded." It is recalled that General Ballington Booth and his wife were "forced" out of the Army in 1896 when they refused to return to England after being censured for receiving support from "fashionable churches," and thus raising the "social standard" of the Army. The following year Ballington Booth formed the Volunteers of America on lines somewhat similar to those of the Salvation Army. Evangeline Booth



"I HAVE GIVEN MY BEST."

With this poignant phrase, Commander Evangeline Booth, of the Salvation Army, greets her recall to England.

succeeded him in the latter body, and under her deft leadership, says the *Public Ledger*, "the American part of the Salvation Army has run along so smoothly and easily that it has passed in men's minds for an American institution."

For almost twenty years Miss Booth has been the head of the Salvation Army in this country, and during her administration, notes the *Brooklyn Eagle*, the students in the Army's training school have increased from some 70 a year to 500, while the assets of the organization have risen from \$1,500,000 to \$23,000,000. "Greater evidences of consecration and executive capacity," continues the *Eagle*, "would be hard to find. The Salvation Army is doing a work in quarters which the churches admit they are unable to reach. If that work does not suffer from the withdrawal of the woman who has inspired and directed it the country will be, indeed, fortunate." "I have always felt that America claimed my best and ungrudgingly I have given my best," Miss Booth is quoted in several reports as saying. Following this cue, the *Chicago Evening Post* remarks that, altho an English-

woman, Miss Booth may be regarded as an American, "since much of her work and undoubtedly her greatest work, has been done in this country." The *Post* reminds us that "she has built up the work of the Salvation Army in this country to such an extent that to-day it ranks among the leading organizations devoted to the poor and lowly. Utterly apart from its accomplishments along religious lines, the Salvation Army has done a sociological work that is of vast import, and it is well known the moving spirit behind this is Evangeline Booth." Moreover,

"The war record of Miss Booth and the soldiers of her Army is something of which this country has reason to be proud. Unpretentiously, without any unusual resources, she set about bringing cheer and comfort to Uncle Sam's fighting men in the American training camps. This work was continued overseas with the result that the 'Sallies,' as the Army workers were affectionately called, won a place in the hearts of the American soldiers that they will occupy forever. Miss Booth's influence has been felt in the jails, the large prisons, and everywhere, in fact, where there has been the need of help and encouragement. As an author she has gained recognition in the world of letters, and her work among wayward girls has been so valuable that it has been commended by the courts. But Miss Booth is to be retired. What the future holds for her is unknown at present, but wherever she goes, whatever she does, she will continue her career of usefulness."

It may be that General Bramwell Booth's plan for a three-headed commission responsible solely to him may prove efficacious, remarks the *Newark News*, "but the personal magnetism of his sister will be missed throughout the land, and it is not to be wondered at that a chorus of protest has been raised against her transfer to other forms of usefulness."

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CURRENT - POETRY

Unsolicited contributions to this department cannot be returned.

AN OLD sea-dog, apparently, is the poet who gives us in *Scribner's* a group of portraits delineating the ship's company—captain, chief steward, apprentice, wiper, and the crew's cook, bold mariners all. Most striking, perhaps, are the verses here reproduced:

THE MESS BOY

By MILTON RAISON

He had contempt that was divine,
For every sailor that he fed,
For while they talked of girls and wine—
He read.

For while they lived the pain and strife
Their dull imagination brooks,
He could appreciate their life
In books.

He washed the dishes, made the bed,
And did their errands with fair grace,
Nor could their insults on his head
Erase

That fine, immobile pride of his
Which brushed against their baser sod,
And was as different as a kiss
Of God.

Two poems, one from the *New Witness* and called "Ricordo di Roma," the other celebrating "Hansom Cabbies" in the *Saturday Review*, show us how brilliantly and at the same time how musically an English traveler can write of street scenes abroad and at home:

RICORDO DI ROMA

By WILFRID THORLEY

The horses in the carts at Rome have plumes of red that stream

From a little brazen helmet tricked with bells that chime and gleam;

And the carters' songs are catchy—

Sono nato per i bacci—

It's the wine that makes them dream.

The wheels that spin beneath the boys that hold the bridle-reins,

Are the yellow of ripe lemons or the ruddy hue that stains

Wickered wine-flasks; and each fellow

Calls his *carro molto bello*

As he rolls along the lanes.

The horses' hides are smooth as silk, and knots of tasselled string

And netted skirts fall down from them to keep the flies a-wing,

As they stride in all their glory,

Distintissimi signori

In their gallant harnessing.

They drive them in from Tivoli by graves of old mis-rule,

Drawing rein at marble basins where the horses sip the cool

Silver waters that in plenty

Run all *dolci e ridenti*

Round the *nalads* in the pool.

Old temples have no awe for them, nor the old gods themselves,

Who drink the wine that Virgil drank, from earth the peasant delves

On the terraced slopes and rocky

Underneath the *belli occhi*

Of the statues on their shelves.

They race, as Romans raced of old when triumphers came home

But not within the ruined Ring that stands in ruined Rome;

Not for ladies in *palassi*.

But *onore di ragazzi*

And the pride of Peter's dome.

HANSOM CABBIES

By WILFRID THORLEY

When I was a lad there were hansoms in London,
With drivers on top of a little back stair
And horses that ran under silver-tipt harness
Or stood by the kerb-stone awaiting a fare,
And tossed in the air
Their nose-bags of corn for the sparrows to share.

And sometimes in Spring when the nose-bags were leaking
And sparrows were loud amid loot of spilt corn,
Old cabby reached over the slender Park railings
And stole a rosette of the double red thorn
His mare to adorn,
With "Fares may be few, but we won't be forlorn."

The spokes they were pointed with red and with yellow;
The brass was like gold where the reins threaded through;
There was sometimes a crest on the old leather blinkers,
A crown on the horse-cloth of crimson and blue
That said, "It's for you
We're waiting, my Lord, and a crown is our due."

Now where are they gone to, the weather-worn cabbies
That drove us alertly through all the dense shoals
That filled the strait Fleet from St. Paul's to St. Martin's,
Or over the bridge where big Benjamin tolls?
O! somewhere their souls
Still murmur, "Where to, Sir?" through the peepholes.

Elysian fields show them pasturing fillies
Sure-footed and shapely—just built for a yoke;
They comb their silk manes and they wheedle and drive them
Down roads without mud where the fogs never choke
And rain's a rare joke
To cheerful night-watchmen with cressets of coke.

The fares that they find there are born in the purple;
Their talk is of Dizzy and Toole and Bend Or;
Their manners are suave and their tips are all golden;
They dwell between Mayfair and Kensington Gore;
And flunkys galore,
Poll-powdered, receive them at Paradise door.

Portraiture, again, is the delight of a contributor to the *Lyric West* (Los Angeles), who pictures a Chinese laundryman in free verse thus vividly:

CHING LOO DREAMS

By JACK HYATT, JR.

Pitter—patter—pit
Yellow feet slipping back and forth.

"Mark this collar;
It is new
And goes with that white shirt, a married
Man is he—I can tell by
His socks."

Some day, some day, I will
Go back—back to
Yen-San,
Land of Lovely Dripping Moons,
Back to her,
Princess of Laughter;
Silks shall be hers and lacquers old,

Jewels and a house—one hundred
Dancing girls
To chase away
The weary shadows in her eyes
—make them Pools of Merriment.
Dancing girls to amuse her.
And I with her
Thru the all too short, short
Night of Slumbering Shadows.

Pitter—patter—pit,
"Thirty-seven cents."

When I return, heads will bow
And I will sit
With robes, scarlet and green, hands clean
All day;
—do naught but eat and sing and dream
And watch, untiring,
My Princess of Laughter dance for mine eyes
Alone.
And when the Moon of Moons
Sleeps for the Hours of Night
I will take her in my arms
—her lips will meet mine,
Taking all—Little Dove of Mirth.

"Eh-h—h—that rice tasted good."
Now, to smoke
And rest for much awhile, to dream
Of soft leaves spread
For her and me
As we
Move in the Floating Shadows
Before the Lifting Waters of Ten-Ye-Sal
—move lazily, dreamily, ever more—

"Collars ready, Thursday."

Next week, next week, I leave
By the Great Bird on the Waters
Across the Sea
—which smiles with me
If I can but turn
A lucky card, tomorrow a day,
At Sen-Ko-Pee's Palace
On the Street of Slanting Shadows.

Pitter—patter—pit,
Yellow feet slipping back and forth.

The London *Poetry Review* brings us a melodious lyric—

THE WOODS OF BRENT

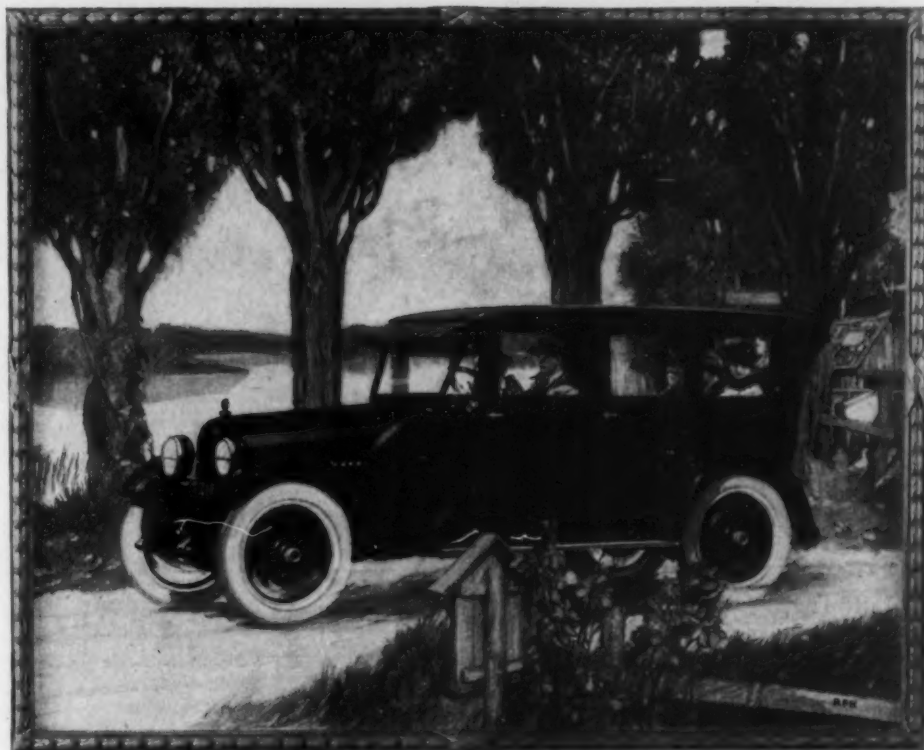
By MARGARET HUME

When I was with my lover,
Beside the woods of Brent,
It never seemed to matter
If shadows came or went.
There was Jinny for the milking,
There was Daisy for the stall,
There were fishes down t' river
And sunshine over all.

When I was with my lover,
A listening to his pipe,
It never seemed to matter
If fruit was green or ripe.
There were swallows in the thatching,
There were poppies in the corn.
And nightingales made music
From dewy eve till dawn.

When I was with my lover,
Sweet hope would run so high,
It never seemed to matter
That clouds were in the sky.
There were berries on the bushes,
There were stormwracks overhead,
There were ripples on the river
Where the leaves were dropping dead.
When I was with my lover,
Beside the woods of Brent,
It never seemed to matter
If shadows came or went.

H U D S O N



MOST BEAUTIFUL OF THE HUDSONS

THE NEW SEDAN IS HERE

The De Luxe Car of the Year, \$2295

It excels even those beautiful Hudsons which were counted matchless values at above \$4,000—the Limousines, Town Cars and Landaulets, famed for their distinction.

No other Hudson so completely sums the body-builder's art. It blends richness and luxury with a simplicity that is the hall-mark of Hudson enclosed car charm. And the promise of its beauty is borne out in the unusual personal comfort and serviceability this model affords.

It seats seven. The lustrous, lasting finish reveals the unhurried and painstaking care given every detail by master workmen, who have always specialized on the finest, costliest cars.

Of course it has the new Hudson Motor, which won such instantaneous admiration everywhere. It is the top step of seven years' development of the patented Super-Six principle. It is equally a revelation to Hudson owners.

(Freight and Tax Extra)

Speedster - - - \$1525
7-Pass Phaeton - \$1575



Coach - - - - \$1625
Sedan - - - - \$2295

HUDSON MOTOR CAR

COMPANY · DETROIT

PERSONAL • GLIMPSES



DID EDEN HAVE ANY MORE TEMPTING FRUIT DISPLAY THAN THIS NEW YORK PIER?

Sales experts, who form an important part of all modern manufacturing organizations, are taking in hand the business of the country's farmers, who also may be classified as manufacturers. Modern sales methods, by cutting out waste, are expected to be a great factor both in reducing the cost of living and in getting the farmer better prices for his product.

THE FARMER AS AN UP-TO-DATE MANUFACTURER

A NEW YORK FARMER sent eighteen baskets of apples to market, the other day, and paid \$1.88 for the baskets. After commissions and transportation charges had been deducted from the price obtainable for his fruit on the day of sale, he received a check for 36c to pay for both the apples and the baskets.

A Colorado potato-grower, not long since, marketed a car of potatoes at a total loss of \$22.00. That is to say, in return for his car of potatoes his selling agency sent him a bill for \$22.00. The potato-raiser wrote back that he didn't have any money, but that he would be glad to send another car of potatoes to make up the debit on the first one, provided he was assured he wouldn't receive another bill of \$22.00 for the second car.

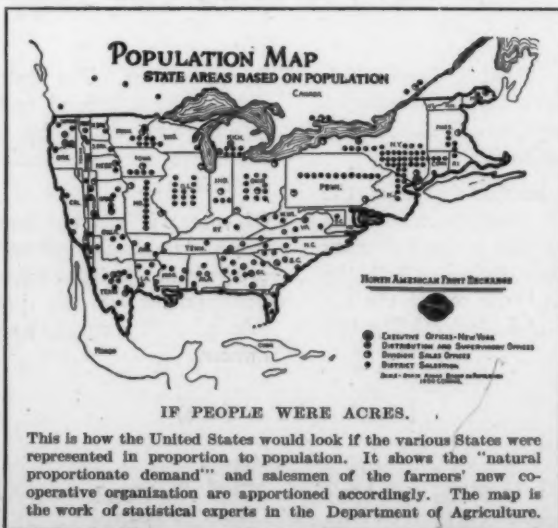
Just now, speaking of potatoes, Government experts are predicting that there will be four bushels of potatoes on the market this fall for every citizen of the United States. The same Government experts, assisted by representatives of farm bureaus all over the country, have figures to prove that the average consumption of potatoes in the United States amounts to only three and one-half bushels per person per year. There seems to be a surplus of half a bushel per person, which, multiplied by the 110,000,000 persons in the United States, makes quite a lot of potatoes.

Here are three isolated facts, but, like the extra half-bushel of potatoes which is facing every citizen of the United States this fall, taken all together, and considering that they are almost as wide-spread as the distribution of farmers in the United States, they are facts that account for a considerable amount of trouble in the country. Agriculture is a basic industry. If the farmer doesn't prosper,

it's highly probable that nobody else will. And the main reason that the farmer has such a hectic time of it, we are informed by a group of Government investigators and individual farming and merchandising experts who have lately been prying into the situation with some persistence, is simply that the farmer has not been properly classified, and treated according to the best practise among business men of his class.

The fact is, we are assured, the farmers of the country are essentially manufacturers. The man who makes an ear of corn grow is as truly a manufacturer as the man who converts that corn into cornflakes. But the cornflake manufacturer, unlike the farmer, is scientifically in touch with his markets. He has enough all-around information so that with him manufacturing isn't a reckless gamble. He has an idea how many packages of

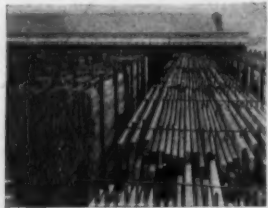
cornflakes he can sell, what jobbers will handle them, what retailers will handle them, how he can stimulate sales in various communities, and who will eat his product. The man who manufactured the ear of corn that went into the making of the cornflakes, on the other hand, was considerably up in the air on most of these subjects. The man who grows perishable fruits and vegetables is even more up in the air. A manufacturer who would go into a market in the blind way common among farmers would be considered either very reckless or very ignorant. A trained sales force would work in conjunction with the production end. One of the main ideas of a





A general view of the seasoning and storage facilities of the Snoqualmie Falls Lumber Company, one of the fifteen complete Weyerhaeuser manufacturing units

LUMBER— That Actually Meets the Requirements



THE growing success of Weyerhaeuser lumber for industrial use is due largely to the thorough and exact seasoning process to which the lumber is subjected—not one process for the entire lumber output, but a distinct method of seasoning for each species, type and size of wood.

The Weyerhaeuser mills have kept pace with the progress made in practical wood seasoning by dry kilns. They have done extensive research work, adapted old processes and developed new ones. They have long realized that the science of wood seasoning properly applied is a saving to the purchaser. It gives a wood easy to work, with little wastage and with a prolonged life.

The illustration above shows loaded cars at the entrance to the kilns of the Snoqualmie Falls Lumber Company. Note the even stacking and the precaution to secure the load to prevent twisting and warping during processing. Stickers are inserted between courses of boards to allow even circulation and drying.

Each charge is tested in the kiln laboratory many times during the processing which forestalls over drying and other faults. When the lumber leaves the kiln it meets with the high standards set by the Weyerhaeuser organization for all its products.

MANY concerns have for years been looking for an organization that could and would relieve them of their lumber buying worries; an organization that could look at lumber from *their* point of view.

That is just what the Weyerhaeuser organization is doing for a great many industrial concerns today. It is prepared to deliver to industrial buyers *a dependable lumber service*, which means far more than the routine of shipping an occasional car of boards.

The Weyerhaeuser organization has for years studied industrial lumber needs. It has found that the best way to serve American Industry is to have ready at all times for a group of permanent customers the exact type of lumber in the correct grade, size and quantity they desire.

Such a service has its beginning way back in the forests, where trees that yield particular types of lumber that fit specific requirements, are marked for special cutting. Close grained, slow growth, even textured, cork-like White Pine logs, for example, are set aside for pattern stock. The same careful selection is practiced for all of the varied softwood requirements of industry.

Such painstaking efforts to serve industry are made possible through utilization of the vast resources and specialized equipment of the Weyerhaeuser organization.

A large timber supply of fifteen different species, and many types within these species, sufficient for decades of cutting.

Scores of logging camps guaranteeing a steady stream of suitable raw material.

Fifteen complete modern manufacturing units.

Seasoning processes that prepare lumber scientifically for each exacting need.

Distributing facilities backed by fifteen immense mill stocks and two great strategically located distributing plants.

A corps of salesmen trained to think as purchasing agents and buyers have wished for lumber sellers to think.

EACH year more and more concerns realize what this type of lumber service means.

The Weyerhaeuser Sales Company distributes Weyerhaeuser Forest Products through the established trade channels. Its principal office is in Spokane, Washington, with branch offices at 208 So. LaSalle St., Chicago; 220 Broadway, New York; Lexington Bldg., Baltimore; and 4th and Robert Sts., St. Paul; and with representatives throughout the country.



WEYERHAEUSER FOREST PRODUCTS SAINT PAUL • MINNESOTA

Producers for industry of pattern and flak lumber, factory grades for remanufacturing, lumber for boxing and crating, structural timbers for industrial building. And each of these items in the species and type of wood best suited for the purpose.



by taking a typical fruit-growing community as an example. "Pomona Center is a country town almost anywhere in the United States," he begins. "Ten months in the year the railroad station is deserted," but—

There is one season, depending on latitude, when it suddenly comes to life. Empty freight cars come rolling in, refrigerator cars for fruit, box cars for watermelons, heater cars for potatoes. Packing-sheds are busy, shooks are nailed into crates and boxes, farm trucks and wagons bring Pomona Center's product in all-day lines for the graders, packers and inspectors. The back country is alive with pickers and harvesters. The ice-plant runs day and night, if the local specialty is fruit or tender vegetables. For berries there may be a precooling plant that lowers its canvas proboscis to each loaded refrigerator car, utters a great sigh, and breathes it full of cold air. Before daylight panting locomotives herd the cars into trains, and they disappear into the night, headed generally north or east. Then Pomona Center goes to sleep for another year.

No other country in the world has such a range of food supplies as our own. No other land has our range of canned and dried fruits, vegetables, fish, meats, milk. And no other nation has so many fresh vegetables and fruits. The discovery of America gave us potatoes, tomatoes, Indian corn, chocolate and a dozen other things, and we have ransacked the earth for the dainties of other climes.

Do you remember when lettuce was on the table only during the home-garden season? To-day, we have it all the year round, several varieties. Its year begins with shipments from Florida around November, followed by Louisiana and other southern States, until the finest heads are ready in the North, with hothouse lettuce filling the gap between the end of the northern crop and the beginning again of the Florida crop.

Then tomatoes. From a local product which people ate fresh during a short season, and canned the rest of the year, it has conquered the whole calendar. American growers have pushed 400 miles south into Mexico, where the "fruit" is ready for shipment to Middle-Western markets early in January, three or four months before the first shipments from California and Texas. Eastern demand is supplied by Florida from January to March, with some from Cuba. Then Texas and Louisiana get into the game, and the tomato marches north until fall finds northern tomatoes going back to southern States famous for winter tomatoes.

Ten years ago the Bermuda onion really came from the Bermuda Islands, but Texas captured Bermuda's markets. The Bermudans made a discovery. Celery also has its year, beginning with Florida and California in late winter, and winding up with the northern crop, chiefly from New York, Michigan and Colorado, which dovetails into the new southern crop. But there was a midsummer gap of a few weeks between the last southern and the first northern celery. So the Bermudans turned their onion fields to celery, occupying that gap.

But Pomona Center may send to the great American dinner-table only a few dozen cars of tomatoes, peaches, melons or berries, and they are ready all at one time. It has less than a month's work for a good sales force, and can not hire one by the year. It has a cooperative association whose officers undertake the selling. But they probably have little city experience, and ship to a few of the largest cities, where competition is keenest, passing on the way good but neglected markets in smaller towns.

The farmers of Pomona Center, it is apparent, need better connections with American dinner-tables. This is in effect the chief finding of a joint Congressional commission on agricultural inquiry, which submitted a report in the middle of the summer. The report stated that the principal cause of increasing living costs in the United States is the "unwieldy system of marketing and distributing commodities, including relatively inefficient means and uneconomic methods." The commission discovered further that "we have reached a point where it costs

more to distribute and serve than it does to produce. Commodity values are lost in a mass of service costs."

It was at about this time that the hugest cooperative enterprise in American history was started, and it is beginning to function this fall. The extensive North American Fruit Exchange will become, on January 1, the sales end of the new organization, to be known as the Federated Fruit-Growers. The California Fruit-Growers Exchange, which proved the value of cooperative marketing, is cooperating with the new organization, and so is the organization which made "Sun-Maid Raisins" as standard a product as "Sun-Kist Oranges" have become through the efforts of the California Fruit-Growers Exchange. In accordance with its policy of introducing manufacturing methods in agriculture, the new organization will see to it that its products are labeled and guaranteed. The farmer who made the goods

will be known, and the producers of good merchandise will be recognized in the farming as they are now in the manufacturing world.

Returning to the case of Pomona Center, under the new régime:

When its crop is ready, a produce sales manager arrives, with assistants. He belongs to an organization like the North American Fruit Exchange, with headquarters in New York and 140 branches scattered over the country. He finds out what Pomona Center will have to sell and wires headquarters. New York lets the branches know, and they bid for the stuff, and order according to local demand. Instead of blindly shipping to a few of the largest points, or the nearest, where it meets the greatest competition, and the crop be unsalable, Pomona Center ships each car to a waiting market. Different grades can be shipped to different markets realizing the best prices at each. Certain sections of the country want big potatoes, while other sections are used to small ones. Certain classes of consumers pay fancy prices for extra large grapefruit, while others find small grapefruit most economical. Pomona Center's crop this year may be below the usual quality. Shipped to markets where it would compete with fine quality stuff from other sections, dealers would not buy it. But there may be sections where it can still be marketed to the advantage of both producer and consumer.

When Pomona Center's shipping season is over, the sales manager and his crew jump out. Early spring may find them marketing tomatoes in Florida or asparagus in South Carolina, July handling watermelons in Georgia or Texas, September in Michigan shipping grapes, and late fall in some northern State directing sales of apples, pears, potatoes or onions. They are at work all the year round. The North American Fruit Exchange began this sales system about ten years ago in a small way, and has grown until it is now handling more than 50,000 carloads of produce annually for about 100 growers' organizations.

But where does the consumer come in? If his needs are calculated day by day, and just enough produce sent to supply him, with no chance for a surplus that will bring down prices, isn't he paying more for his fruit and vegetables?

"On the contrary, he pays less," says Arthur R. Rule, general manager of this marketing organization. "The place to begin thinking about better markets and better prices for the farmer is with the consumer. Fluctuating prices are as bad for the consumer as the farmer. One day a given fruit or vegetable is scarce in a certain market, and the price rises too high for economical use. This high price attracts shipments, there is a glut, prices fall below the point where growers profit, they lose money and stop shipping. When the season's crops show a loss, the grower cuts production, and next season there is scarcity and high prices. In the end, the consumer pays for all these losses.

Working through their market organizations, growers have exploded several fallacies. One of the first was that, having control of their product through organization, they could control the price. But they soon found that every increase in price




THE "JUDGE LANDIS OF THE FRUIT-GROWERS."



Arthur R. Rule is General Manager of a farmers' cooperative movement, called the Federated Fruit-Growers, which is said to be the largest venture in cooperation ever undertaken.





Delco



Starting, Lighting
and Ignition System



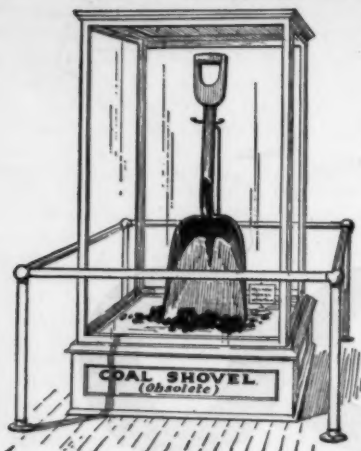
The manufacturers and the owners of the Wills Sainte Claire, which is also Delco-equipped, rightly pride themselves on the car's power and its splendid engineering efficiency.



They know that Starting, Lighting and Ignition performance of the calibre demanded in such a car as the Wills Sainte Claire is dependably and continuously rendered by Delco.

THE DAYTON ENGINEERING LABORATORIES CO.
DAYTON, OHIO, U. S. A.





A Museum Piece

The ancients made fire with flint and steel. Future antiquarians will look back on 1922 as a time when people kept themselves warm by shoveling coal.

Coal is hard to obtain and very high priced—its use entails unnecessary labor—dirt—dust and ashes—it must be stored and paid for in advance.

Heat With Gasteam

The Clow GASTEAM Heating System offers the best solution of the heating problem. Cast iron radiators, with an individually controlled and regulated gas burner under each radiator, give steam heat when and where it is wanted.

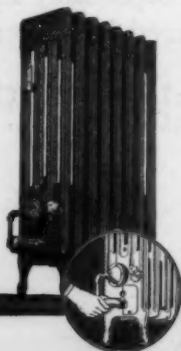
You save on piping. You save space—basements can be used for other purposes, or in some cases no cellar excavation or chimney is necessary. You pay for fuel *after* it is used—turn on heat when you need it—turn it off when you don't. GASTEAM can be quickly installed. Stocks are available for immediate delivery.

Used in all types of buildings

—from bungalows to factories, from the one-man shop to the Woolworth stores. The GASTEAM Book tells of a heating system that is giving satisfaction to thousands in your vicinity. Send for it today.

**JAMES B. CLOW
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General Offices:
536 S. Franklin St.
Chicago



CLOW

Sales Offices Everywhere

PERSONAL GLIMPSES

Continued

meant a drop in consumption, and started middlemen talking about "farmer trusts," and consumers talking boycotts. Again:

If the individual grower could reach market ahead of others, getting a fancy price, he usually thought it good business. But Mr. Rule says it isn't.

Good marketing calls for wider distribution of the crop to reach the greatest possible number of consumers, and a price through the season as low as possible, and as steady, to encourage consumption, with a year-by-year increase in consumption to increase the crop.

The cranberry growers have probably gone farthest in marketing on this principle. Each year, as the crop ripens, they study prices, growing costs, and the volume to be marketed, seeking the opening price which will move all the crop. If the price is set too high, crop movement is checked at the beginning, for housewives decide that cranberries are too expensive and turn to some other fruit. The first price roughly sets the retail price for the season. So, rushing a few early berries to market for fancy prices is discouraged. Furthermore, early stuff may be half ripe, and disappointing to consumers, who turn to some other article. A few carloads of half-ripe oranges can create so much prejudice that the demand for main-crop oranges will be seriously cut.

"Reach more consumers" is the keynote of produce marketing to-day. Where once the bulk of shipments went to a dozen great cities, now they are scattered over ten or twenty States.

Some years ago Georgia had an unprecedented yield of peaches—5,000 cars. Without a marketing organization, 90 per cent. of the crop went to five cities—New York, Boston, Philadelphia, Baltimore and Pittsburgh. Fruit sold for less than freight rates, if it sold at all—much of it was destroyed. This led to a marketing association, and the distribution of the crop over hundreds of communities. With reasonable prices, New York will take from seventy-five to a hundred carloads of Georgia peaches a day, but not half that many if the price is unreasonable. A city of 20,000 people will take two or three carloads a week. A town of 5,000 people is a market worth special care. Georgia's 1920 crop, more than 10,000 cars, was placed so skilfully that no gluts or losses occurred anywhere. The growers' marketing organization in Atlanta is maintained all year round, the much reduced after the shipping season.

In the glut of eastern apples two years ago, Mr. Rule's organization took the fruit of a New York State association that the year before had sold to the six largest and nearest cities, and spread it over twenty States, some going as far as Denver. A few years ago, Michigan grape-growers were selling in three large cities, competing with each other. Now produce salesmen scatter 2,500 cars over 250 communities in forty States.

When Arthur Rule was a produce salesman in Florida, he saw a fine field of

cucumbers, but not a picker in sight. "Prices too low to pick," said the grower.

"Where did you get your prices?" asked Rule.

"New York quotations in Jacksonville papers."

"If I can make money selling these cukes, will you divide profits?"

"I certainly will!"

Whereupon Rule wired produce houses in a dozen scattered cities of 50,000 to 100,000 population, sold the whole crop, and got a good week's salary for his share.

What can be done in small-town markets, says Mr. Collins, was shown by the market-



MORE MICHIGAN GRAPES FOR MORE PEOPLE.

Formerly the crop went to six neighboring cities, as shown in the cut on left. Now it is scattered as shown on the heavily lined map at right.

ing expert of an Ozark mountain railroad. The only market for Ozark apples appeared to be St. Louis. But that city is glutted with apples when the Ozark crop is ready. So markets were sought in nearby oil, zinc and lead towns of 100 to 1,000 population, and in farming sections of neighboring States. One or two cars of apples are about all a small town can use, but 1,076 such towns were found and 2,405 cars of apples sold. Farmers sell each other, too, adds the writer:

The farmer as a customer for other farmers has been shamefully neglected. In corn-belt States he may not even raise potatoes. Fruit and vegetables shipped in cars and carried off by farmers in bulk out over containers and other expenses. New York eats 20,000 cars of potatoes yearly, but farm purchases, according to Government figures, are nearly five times as many—the average farm family buys each year three bushels of potatoes, three of apples, a bushel of sweet potatoes, two pecks of onions, three pecks of tomatoes, ten heads of cabbage, with other produce. The northern farmer buys new potatoes from Florida while he is planting main crop potatoes in May, and the Florida trucker planting potatoes in late winter eats main crop potatoes from New York State.

"Feed the perishables through evenly, as factory products are fed through," advises Mr. Rule. "Ten years ago the farmer began calling in the county agent, who gave him a manufacturing view of his business, and is largely responsible for the growth of the cooperative marketing idea. In marketing as well as production, the farmer is a manufacturer, and will make little headway in solving his sales problems until he follows the successful manufacturer's methods—quantity production, standards of quality that can be depended upon the broadest possible distribution, and the elimination of loss and waste to give the consumer his products at reasonable prices, with a reasonable, dependable profit to himself.

Tarvia

*For Road Construction
Repair and Maintenance*

Along the Rio Grande—

Twenty-five years ago the Rio Grande Valley, in southern Texas, was an arid, desert waste. Today it is called the "Winter Garden of America," and is, perhaps, the most productive section of the Lone Star State.

Irrigation, which the courageous, resourceful settlers secured by pumping water from the Rio Grande, has transformed the stretches of barren sand into fertile farms and plantations. And good roads, which have been obtained by surface-treating the natural caliche and adobe gravel roads with Tarvia, bring the diversified crops, worth millions of dollars annually, within easy reach of the railroads and marketing centers.

In the Valley are thriving towns, the largest of which are Mission, McAllen, Mercedes, and Harlingen. Here, too, the broad Tarvia-paved streets give unmistakable evidence of prosperity and sound, substantial growth.

In selecting Tarvia for all their road-building and road-maintenance work, these far-sighted pioneers showed characteristic good judgment. For with no other material could they have converted, at such small expense, their unimproved roads into smooth, dustless, mudless, all-year highways.

The Rio Grande Valley in southern Texas is but one of thousands of communities throughout the country that have found in Tarvia the economical and satisfactory solution of the good roads problem.

This popular coal-tar material is unequalled for building new roads, for resurfacing worn-out macadam, for repairing and maintaining improved roads of every type. Special grades are made for specific uses.

Illustrated booklets descriptive of the various grades and uses of Tarvia will gladly be sent free upon request to our nearest office.



Main Street, Harlingen, Texas.
Tarvia surface treatment since 1900.



Avenue of Palms, McAllen, Texas.
Tarvia surface treatment since 1919.



Texas Avenue, Mercedes, Texas.
Tarvia surface treatment since 1919.



La Lomita Street, Mission, Texas.
Tarvia surface treatment since 1919.

Special Service Department

This company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by anyone interested. If you will write to the nearest office regarding road problems and conditions in your vicinity, the matter will be given prompt attention.

New York
Detroit
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*To make life better for every man
Is the dainty Cre-Maids daily plan*

After Shaving

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A. S. HINDS CO.

The Beards of our Fathers have passed away
And custom commands that we shave each day,
But a daily shave done thoroughly well
May make the thickest of skins rebel.

Then you'll find HINDS CREAM is just the thing
To banish the burn and silence the sting
And in their stead bring a perfect treat
Of cooling comfort that's quite complete.

All tender skins 'twill help and heal,
Make drawn, dry faces softer feel
And leave a joyous healthful glow
That's fine to see and great to know.

So after shaving here's the scheme
Just use Hinds Honey and Almond Cream.

Agreeable and Effective for WINDBURN AND SUNBURN

To Prevent Sunburn, use Hinds Honey and Almond Cream before and after exposure; also morning and night to keep the skin soft. If the skin is inflamed and sore, do not rub it, but moisten a piece of soft linen or absorbent cotton with the Cream and gently pat the tender surface; repeat until relieved. It will quickly cool the burned surface and prevent blistering or peeling.

For the HANDS

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PERSONAL GLIMPSES

Continued

THE LADY AND THE TIGER

THE first white woman ever to cross the Andes by the Pichis Trail, Katherine Mac Gregor, felt that "to come out of the South American jungles without having killed a tiger would be a disgrace to the entire Middle West," and said as much in her talks with the young ladies of Contamana while waiting for her steamboat down the Amazon to resume its journey. They thought her idea of hunting tigers absurd and "looked at her rather pityingly, wondering what manner of creature would suggest such a scheme when the village phonograph had a repertoire of two fox-trots and a tangina." However, as Miss Mac Gregor tells us in the *New York Times*, one young woman had vision enough to see that the Middle West's reputation for audacity had to be vindicated, and finally recommended a half-witted Indian as a reliable guide. Says Miss Mac Gregor:

I can imagine that when the elite of Contamana learned I had actually engaged him to go up river with me hunting tigers, they smiled, nudged each other and made remarks which might have sounded in English like, "Two of a kind!"

Knowing some of the native shortcomings I had instructed Rómulo to be ready an hour before I expected to start, and he came promptly on the hour—two hours after I had decided that his friends must have prevailed upon him to sacrifice the week's salary which I had promised. One glance and I exonerated him for the delay, for no Lothario could have offered a more sincere tribute than he had paid me. From brown Adonis near-nudity he had transformed himself into an ordinary cholo, or partly civilized Indian laborer by donning clothes obviously salvaged during the days of the Amazonian rubber prosperity. Crownless brim for a hat, a once pale blue shirt from which one sleeve was missing, fragments of overalls supporting patch upon patch of materials varying in weight and color from blue serge to canvas sacking, and remnants of shoes out of which several toes projected. He was a delightful sight and his festive habiliments had converted him from an obsequious loafer into a master of ceremonies.

We had previously decided that rather than cut through the bush, a slow and difficult manner of penetrating jungle territory, we would paddle up stream several miles to a small creek which empties into the Amazon and work in from that point.

So the plan was followed, and Miss Mac Gregor continues,

Late in the afternoon we reached the tiny river and turned from the sunlit expanse of Amazon into a dark, creepy silence. One experiences novel sensations before he becomes accustomed to jungle solitude. Eyes accustomed to open places discern not a trace of animal life, but one surely feels snakes, scorpions, Indians and even tigers all about him. After a time I learned to distinguish the bats clinging to the undersides of leaves and to detect the tiny green lizards scrambling through

the grass, over green stones and into the river. Mosquitoes sensed our approach, heralded our arrival and tortured me with their attentions. One finds himself thinking about the mosquitoes back home with a feeling akin to amused tolerance. They were just annoying, but these pests, laden with malaria and yellow fever, were terrifying. Then I remembered that I had come to hunt tigers and that my fear of mosquitoes was a bit inconsistent with my former bravado, whereupon I put my bug net on and called myself a few choice names.

At dark we dragged the end of the balsa out of the water and up onto a sandy bar, staked it down and built our campfire. After we had eaten, it was too late to try to do anything more that night, so Rómulo swung my hammock under the trees, close to the fire and low enough so that I could reach out easily and grab my gun from the log near by. Then he lay down beside his gun, feet toward the fire, and in a few minutes was sound asleep. After that I began to wonder why I had ever thought it seemed quiet in there. Nervously excited, I lay and listened to limbs crackling, footsteps all about, and was sure that I heard long slippery bodies sliding through the mud, and the cries of wild beasts. Once I distinctly heard the whiz of an arrow cutting the air and, drawing my blanket over my head, waited to be hit. I could not ridicule myself back into fearlessness; I was just plain scared. It seemed like hours later, after the fire had gone out, for I did not even have the courage to call Rómulo to rebuild it, that I actually saw a dark figure go down to the edge of the river. I quickly pulled the blanket over my head, pretending to myself that I had seen nothing, and a little later called the guide to build the fire again. I said nothing about seeing a wild animal, and felt so brave when the fire lit up the woods about that I slept snatches during the remainder of the night.

At daybreak Miss Mac Gregor went to the place where she had seen the creature in the night, and found huge cat-tracks. They led to the water, then back into the jungle, so she confesses,

And that was the way I had stalked my first tiger. I felt humiliated, and, standing on the footprints, promised myself that I would never again indulge in such ignominious timidity.

After breakfast I felt still braver, and when Rómulo assured me that he was certain the "Señorita" would get a "tigre" that day, I replied that there was little doubt of it. The native uses the term "tigre" rather indiscriminately. Jaguar, leopard, panther or tiger, they are all "tigres" to him, and all a nice source of income, providing that he can sell their hides to the occasional Amazon River traveler.

There probably is a great deal of science and skill connected with jungle hunting. I had listened to tales told by men with years of experience, tales which sounded as tho each era had produced but one efficient, successful hunter and each narrator was that one. I tried to think of the methods they had employed, and such sentences as these came to my mind: "I looked him straight between the eyes and took two steps forward," and "She was lashing the ground with her tail!" I had never yet been able to remember what happened after he took the two steps forward, and I am not certain that under similar circumstances I should have taken only two steps or that they would have been



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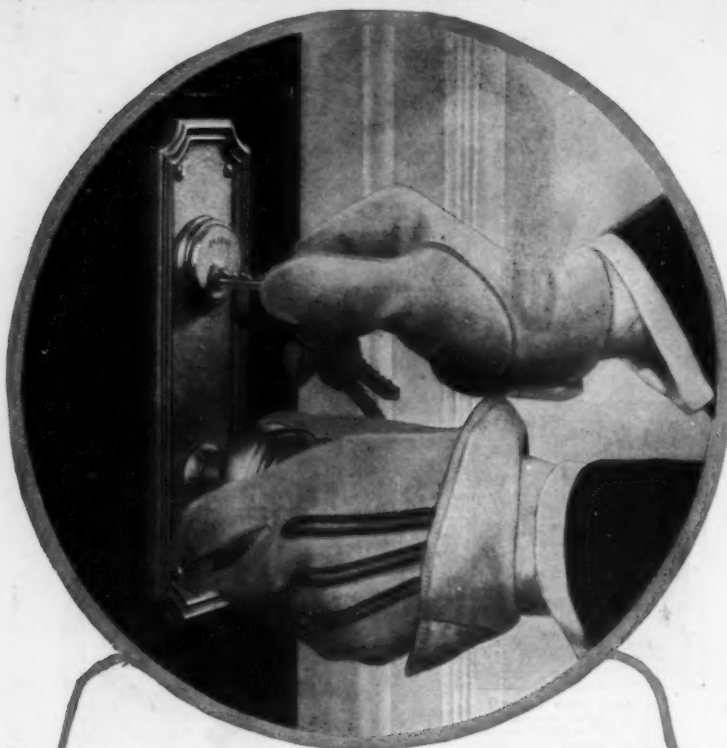
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PERSONAL GLIMPSES

Continued

forward. It seems that there must have been a shot fired somewhere in these hunter stories, because they ended "and he dropt dead on the spot." As for the tiger who was lashing the ground with its tail, obviously the way to stop that was to shoot it.

These stories offered no clue as to the orthodox way to proceed, so I decided to follow the tracks of my night-before animal. This was not as simple as it looked, for the creature had a nasty habit of crawling under low branches and underbrush, making it necessary for me to get down on my knees and sometimes wiggle along on my stomach.

I poked my head through a dense thicket and looked up at the figure of a Yahua savage a few feet away! There I was, flat on my stomach at his feet, gazing up at him for a moment, too startled to move. My memory is hazy as to just what occurred in the brief interim before he, apparently as astonished as I was, and perhaps quite as much at a loss regarding the correct and dignified method of controlling the situation, disappeared in the bush; but I have a vague and haunting suspicion that I smiled insipidly and said, "Oh, how do you do; I didn't see you," all in one breath.

Feeling that this way of meeting Indians was a bit unconventional, to say the least, Miss Mac Gregor stood up and, as she tells us, began seeing things:

In an open space close by lay a dead tiger, and several paces further on were two tiny cubs. The whole situation was clearly this: The Indian had killed the animal just before I came upon him, and had been so startled that he hurried away without taking time to hide his game. The thought occurred to me that he might be close by looking on, but without giving that or the dead animal more attention, I whistled for Rómulo and ran over to the cubs, taking the little clawing, spitting kittens up on to my knees to quiet them.

Only then did I hear a noise at the opposite side of the clearing, and looking up saw a full-grown tigress step into sight. She hesitated a moment. I think I was a surprise to her, too, and then, seeing the cubs squirming in my arms, she tore at me. I suppose she gave the customary enraged growl, roar or snarl, whichever it is that a tigress indulges in when her cubs are in danger. That is another detail which will never be quite clear in my mind. All I know is that what saved me was her momentary hesitation, when I dropt the cubs and grabbed my gun.

I did not stop to "look her straight between the eyes and take two steps forward." I just banged away, and she kept right on coming, without taking time to "drop dead on the spot." I jumped to one side, but she seemed to have forgotten the cubs entirely and had but one idea, and that centered on me. Luckily she gave out a moment before she reached me.

Rómulo had been too far away to hear the whistle, but the shots brought him in a few minutes. He explained that the tiger which the Indian had killed was the mate to mine. We left the Indian's animal, hoping that he would come back later for it, and started toward Contamana soon after noon. And upon me rested the dignity of a tigress slain, but, more than that, the responsibility of rearing two cubs.

MODERN PROFESSIONS GRADED ON A CASH BASIS

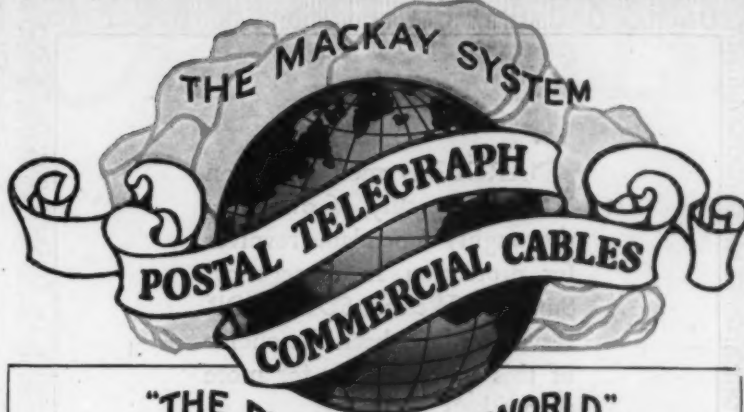
THE great body of the professional men and women of America may be visualized as a mass with million-a-year lawyers and "movie stars" at the top, and men of science and preachers at the bottom. Of course, money is not the only consideration in choosing a career, but a good many people will take that side of professional life into consideration, nevertheless. The low pay which preachers receive, it is commonly reported, has had a great deal to do with reducing the number of candidates for the ministry. Nevertheless, according to a recent investigator, the worst paying profession in the world is science. Albert Einstein, one of the most famous of living scientists, used to get a salary in marks equivalent to about \$6,000 a year, and unless he has received a raise, the fall of the mark has cut his salary to something like \$17.75 a month. Many lesser lights in science in our own country are struggling along on salaries very little better. At the other end of the scale, observes a writer in the *New York Times*:

The law and the films are the only million-a-year professions. Rockefeller and Ford have been estimated to make between \$40,000,000 and \$60,000,000 a year from oil and autos, Ford probably leading. A big world-supplying business is better than any of the professions. The quickest road to wealth is to invent some simple thing that everybody wants. Those who make a million or more a year by strictly professional activities can be counted on the fingers of one hand, possibly borrowing one finger from the other, and they are all lawyers or actors.

Charley Chaplin, Douglas Fairbanks and his wife, Mary, are on record in various litigations as being in the million-a-year class. Motion-picture stars have no secrets. Litigation and publicity leave nothing confidential between them and the income-tax collector. It is not quite so easy to get reliable estimates of earnings in other pursuits.

Levy Mayer of Chicago, who died recently, represented the packers, half a dozen trusts and a legion of wealthy men. He was reputed to earn more than any other lawyer in the country, in excess of a million a year. Samuel Untermyer estimated his voluntary services to the Lockwood committee and the State at \$500,000 a year, according to usual earning capacity, and it might be deduced when he worked a whole year for himself, that his earnings exceeded \$1,000,000. Max D. Steuer, "the greatest trial lawyer" in America, according to Judge Shearn, his opponent in the Eno will case, recently made an affidavit that he received an average of "more than \$1,000 a day" for his appearance in court. A day in court is less than half of Mr. Steuer's working day, and his yearly earnings are said to be somewhere near the \$1,000,000 mark.

Economically, the next best profession is prize-fighting. Jack Dempsey was credited with making \$500,000 last year, and he wants a purse of around half a million for his next fight. Benny Leonard is expected to earn more than \$300,000 this year. Law as a profession, however, has this advantage over its nearest rivals—the lawyer ordinarily earns more as he grows old, but the actor and fighter lose their



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PERSONAL GLIMPSES

Continued

great earning capacity when they pass their prime. The public knows when an actor or fighter is going backward. The public doesn't know that about a lawyer, at least, not so soon. Reputation and ability remain abreast in the case of performers who must please the public. A lawyer is usually much better than his reputation or his reputation is much better than he. Some lawyers, especially of the oratorical type, begin to get fat and lazy when they grow famous, and lose cases fastest when their reputation is at the zenith. But, on the whole, the law tops them all economically. The public pays less to be amused than to be kept out of jail.

The distribution of incomes among the stars in the different professions is inequitable all the way along the line from Chaplin to Einstein. Looking over the sporting professions, or the ranks of those who amuse by their personal appearance in public, the most cultured and the most intellectual probably is Capablanca. On his last trip here, Capablanca said that in his best year he had only made slightly more than \$10,000. He probably could defeat Dempsey worse in a chess game than Dempsey could beat him in a prizefight.

Caruso and McCormick are reported to have passed \$300,000 a year, this income including their royalties on records. Mura-tore was alleged to have received more a night than Caruso, but many doubts have been expressed concerning this. Geraldine Farrar left grand opera because of the chance of making \$250,000 on a concert tour. Mary Garden also has been credited with the ability to earn a quarter of a million if she would star a season on the concert stage.

If foreigners be included, pugilism is equaled economically and grand opera excelled by bull-fighting, says the writer. He is authority for the statement that:

During the zenith of popularity in the ring, Belmonte, the great Spanish matador, was said to have earned more than half a million a year. He landed in New York in 1921 on his way to South America with a contract in his pocket for \$28,000 for one day's bull-fighting at Lima, Peru. Another contract called for \$100,000 for ten successive Sunday exhibitions in Mexico City.

The journalistic profession has a candidate for high rank in Arthur Brisbane, but his income from strictly professional activities and his income from capital investment and speculative contracts might be difficult to separate. Ten or fifteen years ago it was whispered that he received \$50,000 a year. Then he was raised by common consent to \$100,000. To-day he owns papers of his own, is said to manage a chain of papers on a profit-sharing basis, and his editorials are syndicated so that he lays claim to 25,000,000 readers. At four cents a reader he would earn a million a year. This computation would place him among the first six professional wage-earners, but it would take a corps of expert accountants to separate his profits from his professional earnings.

After these come a rabble of stars, the world's greatest income-producing songwriter, playwright, cartoonist, auctioneer, novelist, poet, evangelist, surgeon, cowboy, jockey, etc. Irving Berlin is reported to have had quarter-million years. He was credited with having sold the public of the

United States two words for more than \$100,000, about \$50,000 a word. These were the words "Hooray, Hooray." He took a song that was nothing in its original form. Starting with the commonplace statement, "My wife has gone to the country," he added the two words "Hooray, hooray" and sold it for a profit of more than \$100,000. Song-writing is one profession in which there is no room except at the top. According to Berlin, there are at least 250,000 song-writers in this country.

The high-water mark for playwrights was reached by Avery Hopwood in 1920, when he was receiving royalties from four shows on Broadway at the same time, playing to houses of more than \$56,000 a week. He was author or part author of "The Bat," "Gold Diggers," "Spanish Love," and "Ladies' Night." He also was receiving royalties from the performances of road companies in almost every State at the same time.

Literature and art run a little ahead of baseball, it appears. Taking up some large earners-with-the-pen, the financial record runs:

Harold Bell Wright is on record in an interview as admitting that he made more than \$100,000 a year, and his pen has been reported to have brought him in a total of between \$1,500,000 and \$2,000,000. Booth Tarkington's successes in recent years were said to have produced an income of more than \$100,000. Robert W. Chambers and Gene Stratton Porter, according to literary statisticians, have been in the \$100,000 class. This, unjust as it may seem, is better than Babe Ruth can do. His baseball salary is generally guessed to be about \$50,000 a year, while his earnings on the stage and in the movies and through the use of his name over columns of baseball chatter may bring the total to \$80,000 or \$90,000.

There are alleged to be more painters who earn money faster than Ruth. The low diet in the garret is not necessarily the lot of the artist any longer. How well some of the painters are doing was indicated in an article in the *New York Times* in August, which said:

"Year before last was a good one for painting all over the country. Childe Hassam made sales that year amounting to more than \$100,000. His pictures sold at \$2,250 up to \$8,500, \$12,000, \$12,500 and \$15,000 each. The same year George de Forest Brush sold pictures that brought respectively \$5,000, \$8,000 and \$12,500, and "The Fountain," with a woman and two children, sold for \$18,500."

One hundred thousand dollars a year is more than the best actors and actresses can earn outside of the films. Ethel Barrymore went into vaudeville for a while at \$2,500 a week, and was said to have touched the high mark.

The new profession of rescuing the morals of an industry pays \$100,000 a year in the case of Will H. Hays, Judge Landis and Augustus Thomas. That figure is about the limit for salaries. Judge Gary, who has the right to name his own price, merely draws \$75,000, modestly reducing himself to the level of the President of the United States. When a business executive is worth a salary of \$75,000 or \$100,000, he usually has a partnership, stock or other interest which pays him a good deal more than the salary.

The best paid cowboy in the world is Will Rogers, who earns about \$75,000 a year, but he had to leave the plains for the follies to do it.

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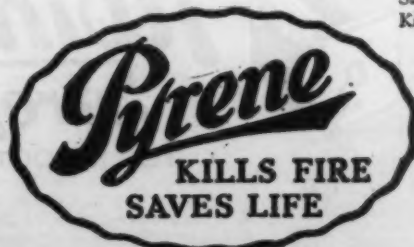
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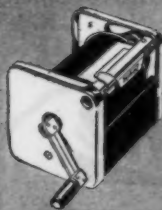


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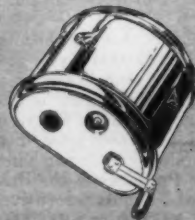
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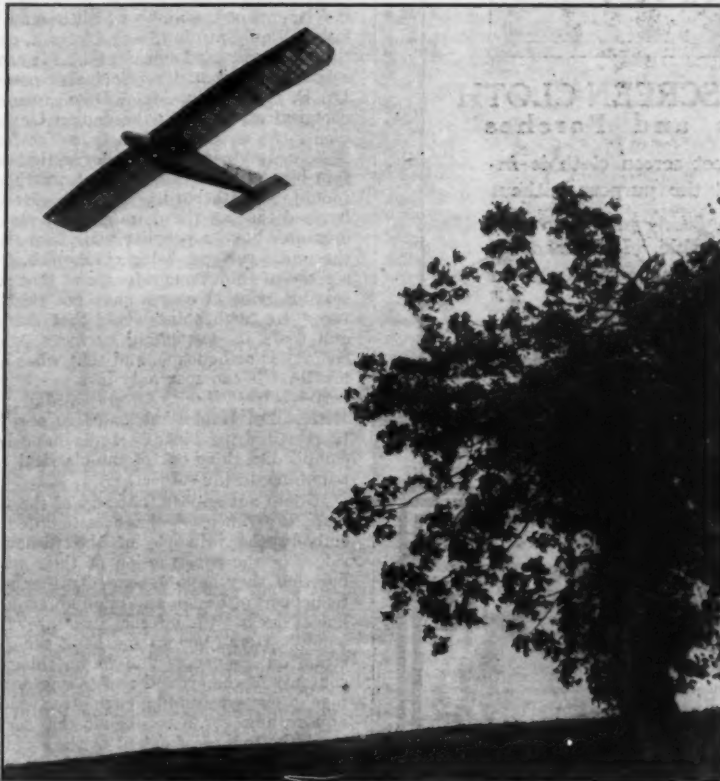
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MOTORING - AND - AVIATION

ARE THE NEW GLIDER RECORDS REALLY IMPORTANT?

WHEN a young German aviator, in a motorless monoplane of his own design, succeeded in soaring about for over three hours, much of the civilized world greeted his feat as the most important aeronautical event since the invention of the aeroplane. French authorities belit-

ian, the *London Daily Mail*, and the *Westminster Gazette* hail the achievement as opening out "a new vista of what may be possible to man in the air when he has neither an engine nor the lifting power of gas to support him." On the other hand, one of our own experts, Professor E. P.



A GERMAN IMITATION OF THE SOARING BIRD.

On planes of this type, without engines or other means of propulsion, both Martens and Hentzen made their remarkable records. Martens is shown in flight. The silent, steady rising of the plane against the wind is described as "uncanny."

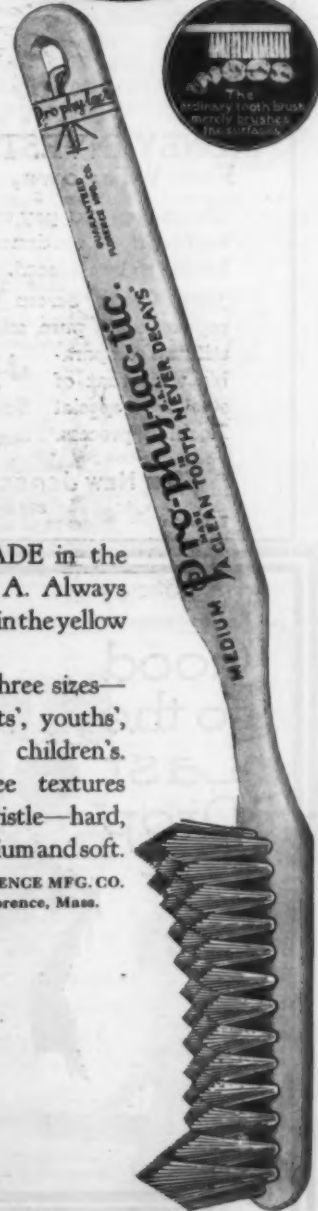
tled the achievement to some extent on the ground that the German record was made above a terrain particularly suited to the man-birds. The air currents had been studied by the German flyers for months, and the records were said to have been made largely by taking advantage of this knowledge, and flying on special occasions when there were rising air currents. The record duration for a glide, at the recent competition in France, was less than ten minutes. It has almost been forgotten, one commentator recalls, that the Wright brothers succeeded in soaring without an engine longer than this some ten years ago.

The achievement of the Germans is considered very impressive in England, where the *London Times*, the *Manchester Guard-*

Warner, of the Massachusetts Institute of Technology, believes that the glider never will become a practical means of transportation.

Taking up first the position of the glider enthusiasts, Major C. C. Turner, aeronautical expert of the *London Daily Telegraph*, brings forward evidence to indicate that we may really be on the verge of the "revolutionary" discoveries which the world in general seems to expect. He questions and comments as follows:

Is there a secret yet unsolved? Do the soarers merely take advantage of rising currents and of the impact of oncoming gusts, contriving their turning movements and down and up gradients accordingly, or can a flying machine be so constructed as to obtain not only lift from its speed through the air, but also speed itself, with-

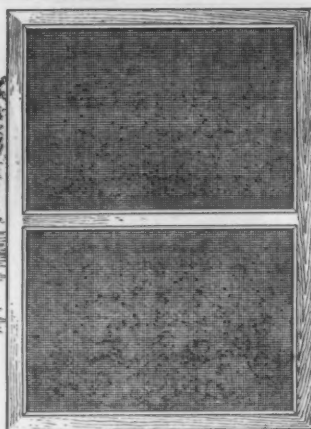


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MOTORIZING AND AVIATION

Continued

out any propulsive mechanism? It is important to remember that on a down gradient an aeroplane speeds up to a velocity that can immediately be turned into climb. The question that must be settled is whether or not a great new discovery is at hand; and have certain birds and insects the secret?

Many observers of natural soaring flight contend that no principle is involved other than those already expressed in the aeroplane, and that birds and insects perform their marvelous soaring flights with motionless outstretched wings and a sense of the movements of the air to which human beings will only attain after prolonged, careful study and hard experience. But a new school has arisen, its principal exponent, Dr. E. H. Hankin, M.A., D.Sc., formerly chemical examiner to the Indian Government. As already explained in *The Daily Telegraph*, Dr. Hankin believes that certain birds and insects obtain from the air some force hitherto unexplained. He discovered that all the more efficient soaring creatures have a peculiar wing formation, the under surfaces being characterized by a series of transverse ridges, and that non-soaring flying creatures have not this feature. He further discovered that the seagull soars in descending currents (which confounds orthodoxy), and that when at a low level it can soar only in a descending current (see *Daily Telegraph*, June 10, 1922). Dr. Hankin's exhaustive observations of soaring birds in India have been compiled, making one of the classical contributions to the subject.

It does not appear that any of the German experimenters have attempted to embody the principle of the transverse ridges in the construction of their wings, but that they have depended rather upon refinement of design and upon an acquired knowledge of "the internal structure of the wind." Herr Martens speaks of the great strain on his nerves due to watching the contours of the ground and taking advantage of every ascending current. It would appear, however, if this be all, that soarers would be to a great extent at the mercy of the ground formation and of the wind so far as the direction of their flight is concerned. It is therefore difficult to explain how some of the flights were made in windless air, while others consisted of numerous perfect figures of 8. Some of the soarers flew as high as 600 feet, and one maintained flight for more than three hours. Beside the German achievements those of French experimenters have been insignificant; indeed, not so good as Mr. Orville Wright's gliding flight of 9 minutes 49 seconds in October, 1911. In Great Britain there has been a curious apathy, and one would have thought a large number of young sportsmen possessed of means and leisure would have been inspired by the German experiments, which first assumed an important shape two years ago.

It is not a question merely of cutting down the weight of the apparatus. The Wright brothers' glider averaged 1½ pound per square foot of wing. Some of the German soaring machines are about the same weight. But the loading of the albatross, one of the most efficient soaring creatures, is more than 3 pounds to the square foot.

It is inevitably suggested that increasing mastery of soaring flight (whatever may be its complete explanation) will lead to the designing of aeroplanes with engines of

two or three horse-power, just enough power to allow considerable speed and additional mastery over the air—hence, safety and reliability. In all probability, however, it would be desirable to extend very greatly our knowledge of soaring before attempting low-power machines. The addition of an engine at the present stage would merely confuse the issue, and would add to the cost of construction and upkeep. Moreover, it would increase the danger, since reliance upon an engine likely at any moment to fail might lead to a bad descent, which, owing to the greater weight, would be at much greater speed than that of the pure soaring machine. Now that several flights exceeding one hour have been made, it is evident that a very great deal of observation and experience will be possible without the engine; would, indeed, be impaired by the presence of an engine.

Soaring should only be undertaken with caution. Undoubtedly there are risks. A number of accidents, most of them trivial, have already occurred. A Frenchman, M. Fetu, was killed at Clermont Ferrand on August 18. In 1920 Eugen von Loessl, a German pioneer, was killed. We are, of course, only at the threshold, and it is very desirable that all practical work should be carefully observed and recorded for the benefit of all. Intimate knowledge of the ways of the air is necessary for flying a machine without power; and the craft should be inherently stable. There will be rare delight in flying long distances without the noisy engine.

An American aeronautical expert, Prof. E. P. Warner, is hardly so optimistic. Professor Warner recently returned from abroad, where he was the American representative at the French and German glider competitions. According to a report in the *New York Times*:

In addition to being recognized in aeronautical circles as the leading glider authority in the country, Professor Warner has gained notice by virtue of the glider entered in the foreign competitions by Edmund Allen, a student in his class at the institute. Professor Warner predicted a great future for the motored airplane, and told of the strides being made abroad in adapting aircraft to commercial needs.

"Despite the fanciful stories concerning air sailing, there is absolutely no outlook for motorless flight as a practical means of transport," he said.

"Most of the German glider pilots have been studying motorless flight force for years. All the longest flights at Wasserkuppe were made in a west wind which blows up the broad slope. Hentzen, Martens and Harmack made their records by taking advantage of rising currents of the same sort as utilized by Orville Wright in October, 1911, when he returned to Kitty Hawk, N. C., to carry on further glider experiments.

"Wright soared for ten minutes and one second at that early date, an American achievement which has been generally forgotten. Whereas Wright took advantage of a wind flowing up the face of the hill at a speed equal to his flying speed, thus being enabled to hover, the Germans did better by gliding into a wind flowing up the hill at a speed less than the flying speed of their own craft. Hentzen took off in a twenty-five-mile-an-hour wind, which was about his flying speed, but on his two-hour flight he remained aloft successfully, even tho the wind by that time had diminished to fifteen miles an hour—ten miles less than his flying speed.

"As to the present condition of soaring



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MOTORING AND AVIATION

Continued

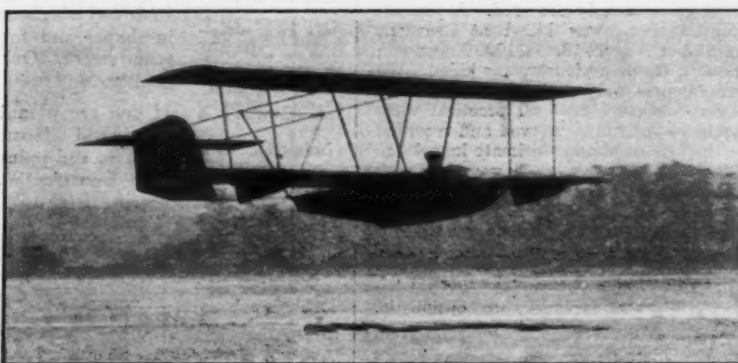
flight, the status, in my opinion and that of the most well-informed persons with whom I talked, is briefly this: The problem can be divided into three parts. The first and simplest is the utilization of air currents, which has been accomplished. All that remains in that direction is to devise means for detecting more accurately the presence and location of these currents.

"The second is to sail in winds of varying velocity. As Professor Langley showed in 1898, it is theoretically possible to take advantage of the 'internal work of the wind,' and of rapidly fluctuating wind speeds to support a bird or aircraft without loss of altitude or direct expenditure of energy being drawn from the wind itself. The problem of soaring flight, as it is

There is one aspect of gliding which must not be overlooked. By the Treaty of Versailles Germany is forbidden to build single-seater airplanes of more than 60 horse-power. But if, as seems really likely, the science of gliding results in knowledge that will reduce engine-power without affecting efficiency, the 60 horse-power limit may well become a farce. The Allies will have to keep a very close eye on Germany's doings and intentions in regard to airplane construction.

F. H. Hentzen, the young German aviator who made both the two-hour and the three-hour soaring records, tells a very simple story of his achievements in an interview forwarded by mail from Berlin to the *New York Times*. He says:

During my two-hour flight in the *Vampyr* the atmosphere was steady and the wind



AN AMERICAN BOAT-GLIDER

"Sail-planing" on a motorless machine above water has been tried out by Glen Curtiss, pioneer airplane builder, here shown in flight. The glider is towed by a motor-boat until it rises into the air. Its "free flights," so far, have averaged only a few seconds.

commonly interpreted, may be said to have been solved only when flight without power in fluctuating winds and without use of ascending currents has been realized. The third and final stage is flight without power when the wind varies its speed at different altitudes."

The *London Daily Mail* takes a very practical view of the matter, and, incidentally, testifies to the solidity of the German achievement by offering prizes for gliding feats to be performed in England. *The Mail* says editorially:

The experiments which have resulted in the German achievement are obviously of the greatest value in the science of flight. They may easily teach us how to economize enormously in engine-power and they may give us new ideas on wing-construction. All students of the air will have to follow the progress of gliding with the utmost attention.

From a sporting point of view it would seem as the gliding had shown up a new horizon. The glider will be cheap and the thrill will be intense. Already, as we print to-day, steps are being taken to form an air-sailing club in this country. The interest of sportsmen is aroused, and we only hope that a lot of rash beginners will not injure themselves and other people and make the sport unpopular. Any new sport which combines skill and interest is sure of a welcome in Britain, provided it is conducted sensibly.

favorable, that is to say, not stormy. I had a jolly good time surveying the pretty landscape of the Rhone Valley during this time, for neither buzzing motors nor revolving propellers needed my attention or obstructed my view. There is nothing to disturb one's attention, so that one can enjoy every sensation that makes flying a real pleasure.

During the three-hour record flight, however, the winds were not as favorable, and I often had all I could possibly do to keep my eyes and hands on the steering levers, which the strong wind shifts frequently turned. In this flight the plane frequently rested in the air.

This was the most interesting flight I have ever undertaken. The competing plane from Darmstadt with Hackmack at the steering gear started immediately after me. He also came very near to reaching my height. At times, when an unfavorable wind shift caught my plane, he even surpassed my mark. There were moments when we were holding the same altitude. We waved at each other and exchanged words 300 meters above the ground, while the numerous onlookers below gazed at us with a cold shiver.

The strong winds and the drizzling rain made it very uncomfortable for those looking on. "I was comfortably enclosed by my fur coat and shouted down to them: 'Are you freezing down there?'" I observed that they understood every word, but their answer I could not hear. I was shouting with the wind, they against it. I heard only a mumble when the whole crowd



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MOTORING AND AVIATION

Continued

cheered when they must have had the impression that I would never descend again. Before I had completed the third hour I noticed that my strongest competitor from Darmstadt had landed.

The end of the third hour left my plane still at a considerable altitude, so I decided to make for the little village of Gusfeld. This was at eight o'clock in the evening and it was commencing to get dark. The Gusfeld Valley lay before me in complete darkness, but I assumed this to be due to the considerable altitude in which I was still planing. After a few steep curves over the village I tried to land. When I started for a landing field I suddenly noticed that I was driving straight into a net of telegraph wires. In the last instant I succeeded, however, in steering my plane by a very narrow margin below the wires and landed in a grain field in complete darkness.

This grain field, however, was bounded by a row of large trees which were outlined against the sky. I strained every muscle at the steering gear and succeeded in the most critical moment in turning the plane completely about itself. This trick alone saved the plane and probably also my life, because it takes little imagination to picture what would have happened had plane and I smashed against one of those bulky oaks. In a minute's time a great throng of on-lookers came rushing to the field to cheer me.

The plane was constructed in the Hanover Waggonfabrik according to plans drawn up by an engineer named Madelung. Four men—Mr. Blume, Mr. Martens, Mr. Mertens and myself—constructed the *Vampyr* ourselves. I took to the construction of motorless airplanes because I always wanted to fly, but had nothing to do it with. During the war I flew almost every kind of machine I could get hold of, but since the war I could find no one who would present me with a machine, as the German General Staff had done, so I decided to build one myself.

Gas engines and motors are a luxury in Germany to-day, so I devoted my entire time to constructing and improving motorless "sailing" planes, as we call them here. Professor Proell and Engineer Dörner of the Hanover Institute of Technology have been supporting me in every respect, and it is really to them that I am deeply indebted for the success of the *Vampyr*. From the very beginning I had full confidence in this motorless machine and was convinced after the first trial flights that I would be able to master it completely.

The *Vampyr* is started by a long rubber cord which is looped into a large hook turned downward and open below. This hook is fastened at the head of the plane. The plane is first held steady while six men pull the rubber cord. When the command "start" is given the six men run against the wind, the plane is released and immediately rises into the air. Then the fascinating flight commences. It is almost impossible to describe the sensation experienced in such a motorless flight. One has the impression of sliding in the air. With strong winds one often remains steadily in the same position. This is due to the weight resistance of the plane, which equalizes the air current. In this respect flying in a motorless plane beats every other sport there is.

THE JUNK FLIVVER THAT WON THE PIKE'S PEAK CLIMB

A NEBRASKA youth, barely turned voting age, lately carved himself a niche in the automobile Hall of Fame by winning the Pike's Peak climb, officially the fourth annual world's championship hill-climbing contest. The papers carried this much of the news, including the name of the young man, which is Noel Bullock. They did not mention that he turned the trick, which included beating a field numbering many of the highest priced cars turned out of automobile factories of America, in a "home-brewed flivver," assembled out of junk, at an approximate cost of \$400. Mr. Bullock hails from North Platte, writes J. B. Day, in the *New York Evening World*, giving credit where credit is due:

He's an automobile mechanic by profession; an optimist by nature, and he nurses an "itch" to write his name alongside those of Barney Oldfield, the Chevrolet brothers, Ralph Mulford and the hosts of speed demons who have made racing history.

For several years Bullock has enjoyed considerable of a reputation as a dirt track driver in the immediate vicinity of his home town, but the Labor Day race was his first dip into the "big-time" game. That the success he achieved with his nondescript distance annihilator augurs well for the realization of his ambition goes without saying.

The notability of his feat was enhanced by the fact that he was pitted against many seasoned race drivers. Several of the pilots had participated in each of the climbs since the classic was established, whereas Bullock had driven over the course but once and was only vaguely familiar with the many dangerous turns and switchbacks on the cloud-ridden boulevard.

The component parts of Bullock's mount came from an automobile graveyard in North Platte. The engine block cost him \$50 and was the most expensive single part comprising the machine. The frame was that of a light delivery truck which had outlived its usefulness, supposedly, when the North Platte grocer who owned the truck sold it to the dealer in automobile junk from whom Bullock bought it. The radiator was from a junked car likewise.

"I got me a set of wire wheels and four new tires," said Bullock, describing the assembling of his brain child, "because I knew I couldn't get anywhere in the race unless my wheels stood up. The wheels and tires, in the aggregate, cost me more than all the rest of the machine, but no single wheel or tire cost me as much as the engine block."

On the engine block Bullock rigged up an eight-cylinder motor—offspring of his own genius as a major mechanic.

The contraption was finished a week before the day of the race. Since he didn't have the necessary money to ship the machine by train, Bullock drove it overland to Colorado Springs—at the base of the famous peak up which the race course winds.

"The engine needed limbering up, anyway," the blond youth explained, "and the trip across the plains and mountains between North Platte and Colorado Springs gave me an opportunity to get a good line on just what my machine would do."

When Bullock drove into Colorado



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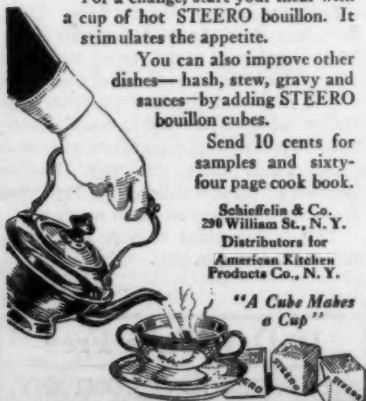
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Continued

Springs on Saturday afternoon, September 2, and pulled up in front of the garage where most of the entries for the race were quartered; race enthusiasts and pilots were hard put to suppress smiles of derision. Bullock sensed the spirit of ridicule in the spirit of the crowd which gathered about the "latest arrival," but he smiled and said nothing.

Ranged alongside of the big, powerful, beautifully finished cars that were entered for the event, representing some of the most expensive ones manufactured in America, the unpainted, hoodless burlesque of an automobile herded by the unassuming Nebraska lad looked, as one spectator expressed it, like "a cross between a kiddie-car and a pushmobile." However, Mr. Bullock let them have their little jokes, and even joined in their humor. He had gathered an idea, on the way over to Colorado Springs, of what he could expect from his collection of junk. Even a brief acquaintance increased his respect for the car he had concocted. It amused him, also, to leave it looking rough and uncouth on the outside, like the extemporized machine it was. It was pleasant to know that however his car might look—and she certainly looked bad enough—inside she was the equal of the most expensive and well-groomed machine driven by his competitors. Therefore, with a certain amount of confidence, as Mr. Day continues his story:

Saturday night Bullock slept in the machine. He had two good reasons for his choice of a lodging place. One was that he didn't want to get very far away from his machine; the other that he was not overburdened with funds.

Sunday he took "Old Liz," as he calls it, over the race course, for the dual purpose of testing its climbing ability on a real hill and familiarizing himself with the road.

Bright and early Monday morning he was at the starting-point—Crystal Creek Bridge, between mile-posts 5 and 6 on the highway. He greeted race officials with a broad smile and a hearty "Howdy!" and proceeded to talk shop with the pilots who had preceded him to the starting-tape.

With the starting-time of the first machine but a few minutes away, one of the officials noticed Bullock had no number on his "bus."

"Where's your number?" he demanded. "Haven't been given a number yet," was the embryo speed king's comeback.

The official consulted his list and ascertained that Bullock was listed to start as No. 24.

Bullock poked around in his tool-box and brought out a small can of black enamel. He dipped a forefinger into the fluid and scrawled a none too symmetrical "24" on either side of the cowl.

"Guess that'll do," he remarked as he stepped back to survey his work.

And then the race started. There was more or less excitement as the racing cars roared away from the tape at five-minute intervals to the accompaniment of cheers, whistling and handclapping, but there was one person in the vast throng who evinced no signs of surging blood or tingling nerves. That person was Noel Bullock.

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The Pike's Peak auto highway runs from the picturesque little town of Cascade, in Ute Pass, to the very tiptop of America's most famous mountain. It is eighteen miles in length and the race, starting at a point between mile-posts 5 and 6, covers a span of 12¼ miles in which there are 147 curves. The average grade is 7 per cent. and the maximum grade 10 per cent.

The summit of Pike's Peak is 14,109 feet above sea level and there is scarcely a day in the year that does not see either rain, snow or sleet—frequently all three—on the vast stretches above timberline. Ordinary driving over the motor highway is what might be termed "ticklish business." Racing at top speed around the hairpin curves and letter "S" turns is calculated to make the stoutest heart flutter.

It had rained and snowed, alternately, on the summit Sunday afternoon and night, with the result that when race time arrived the last three miles of the course were almost ankle-deep in soft slush, making fast driving particularly precarious. Predictions were made that the pilots would not be able to approach the record of 18.24.7, made by Ralph Mulford in a Hudson in 1916.

When W. S. Haines, veteran pilot and first started, flashed up the peak in 20:31, the wisecracks evinced surprise and the chances of Bullock's gas-gargling contrivance seemed to vanish in thin air. But Bullock never quit smiling. His faith in his home-made racer did not falter.

Harold Brinker, piloting the machine which made the third best showing in the time trials which were held the day before Bullock arrived in Colorado Springs, "hurdled the hill" in 20 minutes 45 4-5 seconds. King Rhiley, last year's winner, took his car to the top in 20 minutes 5 seconds. P. R. Abbott went up in 20 minutes 7 seconds, and—

Noel Bullock, tow-headed "kid" from North Platte, Nebraska, a rank outsider, counted out by the wise guys before the race, crouched over the wheel of what his rivals called a "tin can," flashed over the tape in 19 minutes 50 4-5 seconds, after one of the most hair-raising exhibitions ever seen on any race-course.

He was still smiling when he clambered out of the improvised seat of his improvised flivver. He had reason to smile, for he had shown his tail, figuratively speaking, to the elite of the automobile universe; he was king of the hill-climbers, owner of 500 big round simoleons—the prize that went with his victory—and proud possessor, for a year at least, of the Penrose trophy, a cup fashioned of Colorado silver and gold, standing 48 inches high and reputed to be the richest trophy ever offered for an automobile race.

Bullock's exhibition of driving was catalogued by spectators who were on the course at previous races as the most startling they had seen. He took the dangerous curves with throttle wide open and exhaust roaring like a battery of machine-guns. Once he came within an ace of disaster—possibly death—when his machine skidded to the outer edge of the course and his left hind wheel dropt over the side. But the transmission housing stopt the threatened plunge, the tire on the right rear wheel bit into the gravel roadway and got him back on the course.

"I wouldn't want to drive it after dark," was his laconic comment on the hazards attending the race up the world's highest automobile boulevard.



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HOW MANY MORE MOTOR CARS HAVE WE ROOM FOR?

THE American public can still find use for 7,000,000 passenger motor cars, in addition to 10,200,000 that are now in operation, and it can also produce the money to pay for them. This, at least, is the deduction of a cheerful optimist, Park Mathewson by name, writing in *Motor* (New York). This impressive total of 17,000,000 cars as the possible ultimate automobile equipment of the United States may be difficult to swallow, but, contends Mr. Mathewson, figures and facts bear out the contention in a way which at least demands respectful attention. By 1936, he believes, the number of passenger cars in operation throughout the country will total 17,200,000. He recalls that just 5,000 such cars were running in 1900, that the number reached 500,000 in 1910, 8,500,000 in 1920, 10,200,000 in 1922, and, he prophesies, conditions are decidedly in favor of the immense total he foresees by 1936. He comments and argues to this effect:

For many years motor-car manufacturers have been haunted by the "saturation spook." One can picture the earnest builder of passenger cars locked in his sanctum, scratching his head and murmuring, while he gives the order to double production for the year to come: "I wonder how many of the dern things the public has got money enough to buy, anyway?"

A story is told, and it is a true one, of the president of one of the big quantity production companies, who raised a storm of jeers and laughter at a banquet about twelve years ago, when he announced that he believed the saturation point would not be reached until 5,000,000 Americans owned motor cars. Perhaps our estimate of 17,000,000 cars as the ultimate in view now will seem just as foolish in an equally short time.

While history is not invariably an accurate index of the future, despite the ancient proverb, nevertheless, for the present discussion a glance at the past does suggest, not a definite forecast of the future, but a foreshadowing of the infinite possibilities indicated by present achievements.

In the early days of the motor car, the passenger vehicle was denominated as a "pleasure car." This was a rather loose term, considering the possibilities for anguish contained in the crude little contraptions that seldom "took us there" and even less frequently brought us back. "Rich man's toy" was another epithet hurled at the early motor car, and this term had substantial foundation on fact. Only a wealthy man could afford to support one of those early cars with its constant

and insistent demand for repairs and replacements. The motor-car buying public was assumed to consist of the 150,000 families with incomes in excess of \$10,000. That a family with a yearly stipend of between \$5,000 and \$10,000 could afford to own a car was considered out of the question. The fewer than 500,000 households with a yearly income ranging between \$3,000 and \$5,000 were considered as positively and permanently outside any possible car-buying class.

When we scan the figures, 10,200,000 passenger cars now in use, we realize to the



"SHE'S BOUND TO GO ALONG, BUT CAN'T WE FIND SOME WAY TO REDUCE HER WEIGHT?"

While some enthusiasts are prophesying 17,200,000 cars in use in America by 1936, this is one cartoonist's idea of a large, solid consideration that every automobile dealer must face.

—Roche in the *Motor World*.

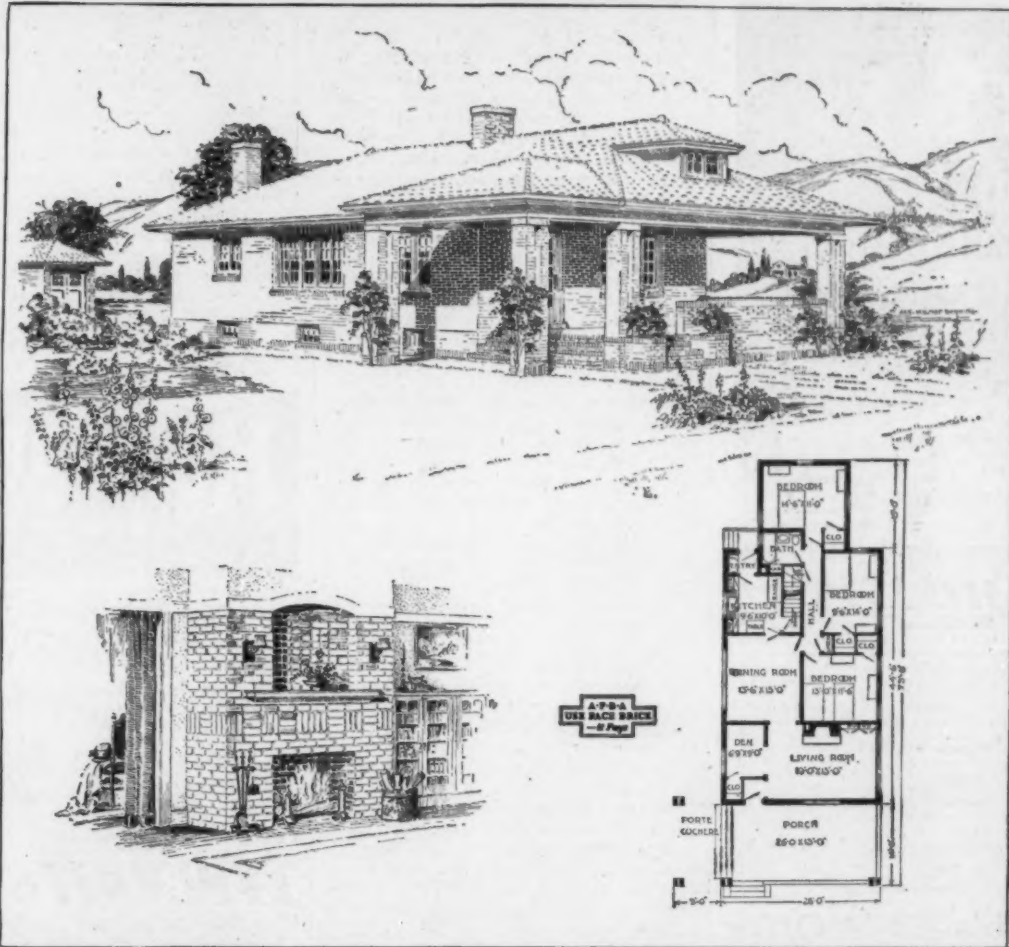
full how futile were those early estimates of the ultimate saturation point for the motor-car market. An experience of this kind tends to make a critic hesitate before delimiting too closely the purchasing possibilities of the future five or ten years hence.

In the light of this historical attitude and of present facts as represented by the huge total of motor cars now in use, it is extremely interesting to try and locate the specific whereabouts of the cars in relation to the estimated number of families within certain definite income classes.

At the present time the most accurate data obtainable shows that families receiving in excess of \$3,000 per annum, number not much over 1,000,000. Taking the next division we found that the total number of family units with incomes of over \$2,000 and not over \$3,000 is less than 3,000,000, which gives us a total of approximately 4,000,000 families in the \$2,000 and over income class, which might be considered the motor-car buying possibilities of the country.

With 10,000,000 passenger motor cars registered at the present time and with only 4,000,000 families having apparent incomes in excess of \$2,000 per annum, it is perfectly obvious that 6,000,000 cars are owned by family units with incomes ranging below \$2,000.

As a matter of fact, one of the factors



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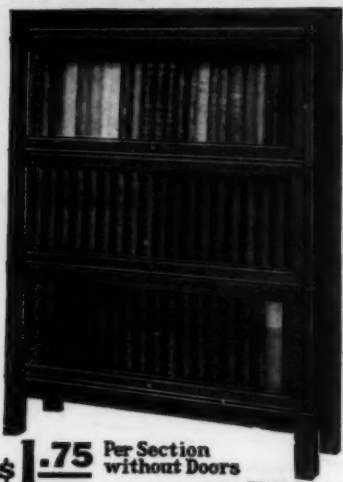
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MOToring AND AVIATION

Continued

contributing to this condition is found in the adjective "apparent" modifying income. Apparent income is something quite different from actual cash income. For instance, a farmer may have an actual cash income of only \$900, has his house and his food as mere perquisites. His \$900 of apparent income very nearly represents the superfluity of a city dweller with a very much larger actual cash income. To the farmer his \$900 of cash income is nearly all "velvet," while the man in another walk of life has to save hard to achieve any such balance at the end of the year. So it is that the farmer with an apparent income below the income-tax minimum is yet a perfectly legitimate prospect for a low-priced car.

Another condition that must be recognized in estimating the ability of families to support motor cars, is the fact that in rural districts the cost of maintenance is reduced to a minimum. The average barn or shed serves as a garage, and there the owner can carry out most repair jobs. In this case the first cost of the car, with gasoline and oil are about the only expenses connected with ownership. This condition is reflected in the relative number of sales of cars made in country districts as compared with the cities.

Taking it for granted that the cost of living will not vary greatly in ratio from the rate of American incomes during the next five years, we find a number of facts to consider. We know that the vast majority of motor cars in use to-day are owned by families having incomes of between \$1,000 and \$4,000 per annum. Statistics tell us that there are 19,000,000 families in this income class. The fact that this class already has bought and is operating 9,000,000 passenger cars is a significant indication of what may be expected from it in the future.

As a sidelight on the purchasing power of this income class, it is interesting to note the banking estimate of the investment power of the class during the war when Liberty bond purchasing was the important function of our national life. The statistics gathered by banks at that time showed that families having a yearly income of \$1,000 to \$2,000 could make an annual bond investment of about \$200. Those with incomes ranging from \$2,000 to \$3,000 could invest somewhat over \$500, while the class from \$3,000 to \$4,000 could put \$900 of it into bonds.

Accepting this as the saving capabilities of the various incomes classes, it is apparent that by applying one year's accretion as the first payment on a car and taking twelve more months to pay the balance, the respective classes are potential buyers of cars costing \$400, \$1,000 and \$1,800, respectively. The first two classes could buy 19,000,000 cars and the third class could account for nearly another million.

A gross potential market for 20,000,000 passenger cars is thus indicated, but the writer admits that this is scarcely a conservative estimate. He observes:

Many of these "potential" families live in cities, where maintenance of a car would be impossible, even after they had mustered the first cost. It is impossible to figure exactly, but remembering that there are practically as many families in the potential class which have not yet purchased cars

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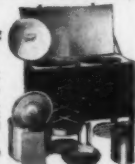
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as the 10,000,000 that have and that there is a large class with "apparent" incomes below our minimum figure, which are yet able to buy cars, have done and will do so, it is conservative to place the present visible saturation point at 17,000,000 as we have done.

Now as to the time that it will take the automobile industry to saturate this potential market. Production of passenger cars never has reached 2,000,000. The year 1920 holds the record and that was 1,883,158 passenger motor cars. Last year, 1921, the total of passenger cars produced reached 1,514,000. The present year will beat 1921, but probably fall below 1920.

Authorities differ as to the length of life of a motor car in the United States. Estimates range from four to six years, and to be entirely fair we shall take the latter figure. Assuming, then, that the average car runs for six years, during 1920 the cars built in 1914 must be deducted from the total. The production in 1914 was 543,679 and subtracting this from 1920's 1,883,158, we have an actual addition to the cars in service of 1,300,000. Doing the same for 1921, we subtract 1915's total of 818,618 passenger cars from 1,514,000 and this leaves us fewer than 700,000 actually added to the total in service. When the time comes to deduct from the total product of 1922, say 1,600,000 passenger cars, the total produced in 1916 of 1,493,617, we shall have an actual addition to our motor population of only about 200,000.

If we allow the generous estimate of 500,000 new cars per annum, above the death-rate of old models, it would take the industry fourteen years to reach the saturation point of 17,000,000 passenger cars.

INTO THE GRAND CANYON, AND OUT AGAIN, BY AIRPLANE.

THERE are only two ways to do the inside of the Grand Canyon, it has been said and proved to nearly everybody's satisfaction: one is on muleback, and the other afoot. There was another way which Major Powell tried in 1869, when he "shot" the Colorado River for a distance of 1,000 miles, but that is not a method which has proved, or is likely to prove, popular. A fourth way was demonstrated the other day when Royal V. Thomas, a civilian aviator from Kansas, dropt over the rim in an airplane and landed safely at the bottom of the gigantic and fantastic chasm. He not only landed, but he soared up and out again without much difficulty, and gave it as his opinion that an airplane furnished the best point of view from which really to appreciate the Grand Canyon of the Colorado. Thomas is the first aviator who ever attempted to descend into the big gulf. As A. Gaylord, writing in the *Kansas City Star*, recalls:

A commander of the British Royal Flying Corps visited the Grand Canyon some twelve months ago and gave it as his opinion that landing in this great terrestrial crater would be extremely dangerous for an aviator because of the many treacherous air currents, and that the feat would probably not be attempted for some time to come.

Mountains, canyons, cliffs, rocks and trees, ravines and valleys disturb the air currents almost exactly the same as water is affected when flowing over and around



Everest The Highest Point On Earth



This photograph was taken at Khamba Dzong, Tibet, a short distance from Everest. The figure wearing the sun helmet is General, the Honorable C. G. Bruce, Commander of the Expedition. Opposite, one of the members is operating the Remington Portable. Writing from Khamba Dzong on April 13, 1922, General Bruce says: "The Remington Portable Typewriter is a very great success and we have it continually in use—it has gone through a pretty hard trial as we have taken it over several high passes in very bad weather."

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MOTORING AND AVIATION

Continued

huge boulders, cliffs and other obstacles, and the air has its eddies, whirlpools, up currents and down currents; its airfalls like the waterfalls.

Most aviators, I venture to say, would have been content to fly down into the canyon and make a safe landing. But not so Thomas. He was not satisfied with his performance until he had climbed back up again without landing and then dropt over the rim in a long tail-spin, which carried him nearly to the bottom, five thousand feet below, while throngs of tourists stood along the rim above and others astride donkeys paused on the steep trails below—gazing in open-mouthed astonishment. It was upon one of the plateaus that Thomas landed in his Thomas Special airplane.

Leaving his plane at Williams, Ariz., some days before his flight, he went by train to the canyon to inspect the valley for a possible landing-place. Arrived at the canyon he joined a party of tourists going down—on donkeys—and went with them down the Bright Angel trail. At Indian Gardens Thomas left the tourists and struck out across the valley and soon found a likely looking spot. It was covered with greasewood—a small western shrub, about eighteen inches high—and was fairly level and about 60x450 feet.

The following day he obtained permission from Colonel Crosby, park superintendent, to attempt the landing, and the latter sent a park ranger down with Thomas to mark the landing-place and to estimate the time necessary to clear and put it in shape for a landing. This was accomplished by five men in one day.

This done, Thomas returned to Williams, sixty-three miles distant from the canyon, and on the following morning, Tuesday, hopped off. Climbing to an altitude of one thousand feet, he pointed his plane toward the canyon, following the railroad. When within about eighteen or twenty miles of the big chasm he rose to an altitude of two thousand feet, for below him was thick shrubbery and trees, making it impossible to land without a crash, and altitude was necessary to permit him to make a long glide over this bad stretch back to safety in case anything went wrong with his motor.

Continuing at an altitude of two thousand feet until he reached the rim, Thomas circled out over the canyon to test the air, returning in a few minutes and dropping to within a hundred feet of the rim to take some pictures of El Tovar hotel and its cluster of small buildings, including Bright Angel cottages. Then, circling back over the railroad station, he dropt to about twenty feet above the buildings and the crowd of tourists, and to show the perfect balance of his plane, held up both hands, smiling as he glided by overhead.

Completing another circle and again flying low over the tourists standing along the rim, he headed straight for the edge of the big cut. To quote further from Mr. Gaylord's description:

The motor was ticking as steadily as a clock. Up to the rim, and then, with a throttled motor, he dropt slowly over and down—down into the very bowels of the earth!

The plane rocks a bit as it strikes an angry cross-current of air. Far, far below

are rocks, rocks, rocks, and at the very bottom a silvery thread—the Colorado. Bright Angel trail creeps slowly up under the nose of the plane; then passes as slowly up and back behind, twisting and winding back and forth until lost from sight at the rim of this Devil's Bowl. Thomas looks over his shoulder and smiles—he is thinking of the many long hours he spent riding up and down, or rather down and up, that same awe-inspiring trail on the back of a donkey.

A group of pigmies on toy donkeys steals gradually into view under the nose of the plane. A wave of the hand and an instant later they are looking down upon the airplane—it is far below them.

Indian Gardens creeping up slowly under the plane; now the watering-place—and the plane passes out between Hopi point and Mojave point and into the great plateau section of the canyon. Below is the tiny landing-place—a small, flat, oblong, almost surrounded by rocks, pinnacles, towers and buttes. It is a simple matter now to make a safe landing. But does he do it? No. He is pointing the nose of the plane upward now and begins climbing in wide, graceful circles. He soon reaches an altitude of about four thousand feet from the bottom—still a thousand feet below the surface of the earth.

The motor slows down. Thomas waves his hand to the people gathered along the rim high above him. The nose of the plane shoots up. One wing drops. Then the nose topples over and the plane shoots down. The tail wiggles and twists. Down, down, down; five hundred feet, eight hundred feet, one thousand feet—the plane is plunging and whirling to the bottom at a terrifying speed.

Suddenly the motor begins to roar again. The plane has straightened out and now is flying on a level course. The most dangerous and yet the most useful stunt known to aviators has been executed for the first time in the very bowels of the earth!

The huge, graceful eagle turns slowly, circling gradually downward and, with diminishing speed, glides toward the small landing-spot among the boulders and gently, very gently, settles down and stops, rolling all the way across the small landing-spot and stopping about fifty feet from the edge of an 1,800-foot gorge.

Now, getting down into this rock-studded valley safely with an airplane was one thing; taking the air again from such a small clearing for the return trip back to the rim was another and entirely different matter. To take off, an airplane must get a fairly long run to pick up speed.

The return was not made until the following day, Wednesday. After landing and making the plane fast as best he could, Thomas returned to the rim, via the donkey route. He had no more than reached the top when word came to him that a high wind had turned his plane half-way around, breaking off the tail skid. This he repaired with a piece of broken automobile spring and wire.

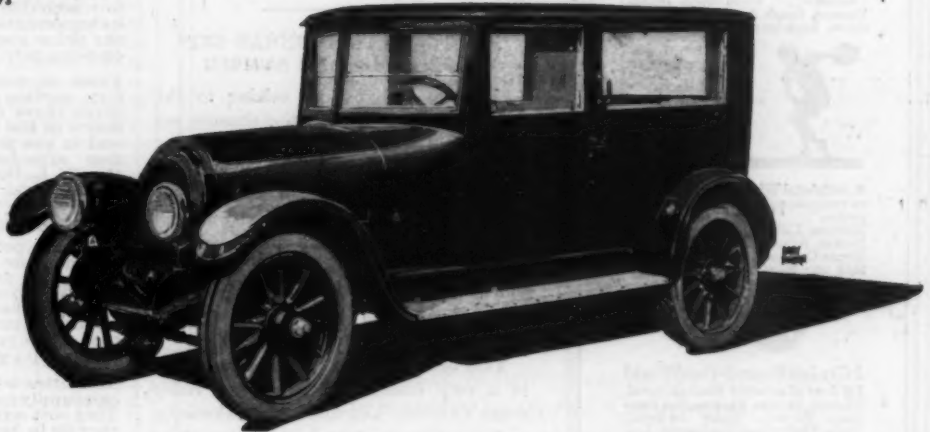
At 10:12 o'clock Wednesday morning Thomas hopped off from the small plateau at the bottom of the canyon. The wind changed 60 degrees while the airplane circled this small plot once, and only a very short run could be made for the take-off, so that by far the most difficult phase of his undertaking was before Thomas. Indeed, it was this return flight to the rim that worried Colonel Crosby, the park superintendent, more than anything else.

Getting a short but fairly good run for it, Thomas banked the plane steeply against the wind and began to climb in

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MOTORING AND AVIATION Continued

very small circles, keeping always within easy gliding distance of the landing-spot. After circling the small field in this manner until the plane gathered speed he gradually widened the circles, reaching the rim at 10:17. Thus it required five minutes to climb the mile from bottom to top.

HOW THE AUTO SALESMAN GETS YOUR NAME—AND NUMBER

BEFORE you've been talking to the salesman very long, the chances are that he will produce a little book and just casually ask you for your name and address.

"No, I would rather not give my name," you say, fearing that if all the salesmen at whose cars you have looked during the course of the afternoon were to discover your whereabouts they would descend upon you like a swarm of locusts.

That being the case, the salesman replies in a very disarming way that it really doesn't matter. You thank him awkwardly and bid him good-day, wondering if he has, after all, recognized you, and whether there will be a new sport model waiting to take you for a demonstration when you reach home. There is a good chance that the model will be waiting. The explanation, says Frederick C. Russell, in *Motor Life* (New York), is that—

The salesman simply commissions a comrade of his to follow you to your car and note the number of the license plate. In ten minutes he has looked through his file of State motor car registrations and knows all that you refused to tell him.

I was particularly amused the other day by an incident which occurred in the sales-room of a new make of car where each prospect means a lot. A man had sauntered in and asked to see a coupé. The salesman replied that the only car in stock of that particular model was out for a demonstration; and then suddenly, as the trying to gather the threads of a disconnected story, asked:

"Are you Mr. Bell from Avon?"

"No," the other said, shaking his head. "I'm from Avon, but the name happens to be Moore."

"A Mr. Bell—I believe that's the name—had an appointment to meet one of our salesmen here about this time," the salesman explained. "I thought you might be the party. I'm sorry we haven't got a coupé on the floor to show you, but if you'll wait—or perhaps I could call you up when the demonstrator returns."

"Well, I wouldn't bother about that," the other replied. "I can stop in again."

"But have you definitely decided upon a coupé?"

"Yes; you see, I'm a physician. . . . Well, I'll drop in again. Thank you."

The departure was abrupt and speedy; and doubtless the car shopper went away thinking that for once he had slipped away without giving his name and address. But the salesman proved that the situation was quite the reverse. In three minutes he had connected with Dr. Moore's home via telephone and had ascertained that he would be home at five-thirty. The coupé

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Pain Stops Instantly

demonstrator was standing in front of the doctor's home when he rolled up in his old car.

If automobile salesmen didn't follow up their prospects they would be a disappointed lot in the great majority of instances. Names and addresses are the most vital factors in the automobile salesman's business, for without prospects there are no "prospects." And as motorists dread the idea of revealing their identity, it often requires a bit of cunning on the part of the seller to obtain the necessary information.

Especially is this true nowadays, when all motorists are curious to inspect the various new makes and models. In many instances they haven't the slightest idea of making a change, but are eager to know whether the new car offers any advantages over the old. If the new model is better, naturally the salesman is losing a chance if he doesn't follow up the first "spiel" by letting the prospect get the "feel" of the car. And as all salesmen are absolutely "sold" on the superiority of the boat they are selling, it is absolutely essential to prove to the shopper that the proposition is the "greatest car in America."

One little obstacle in the way of this unbounded enthusiasm is the man who thinks it is clever to give a fictitious name and address. In most cases the type of person who does this sort of thing doesn't make a very desirable prospect, anyway; but there are exceptions—particularly where it is plain that the "looker" has resorted to this hackneyed subterfuge because he is the sort of person who not only prefers not to be hounded by persistent salesmen, but hates to have to explain all this as well. If he should be frank enough to state that he prefers to remain unknown, it might result in an argument. He thus travels the path of least resistance by inventing a name for the occasion. The clever car salesman uses a special form of talk for this situation. Here is how one fellow handled it:

The shy prospect had just given his address as 752 North Pine Street. After making a note of it in his memorandum book, the salesman brightened a bit and asked rather casually:

"Then you're probably acquainted with Mr. Bronson, who lives at 756?"

"I've never met him," the other faltered, "but I see his car standing in front of the house. It's a twenty-one model, isn't it?"

"Twenty-one?" the salesman asked, puzzled. "Why, Mr. Bronson told us he didn't have a car."

"I'm thinking of my neighbor across the street," the other hastened to explain, trying to drop the conversation by asking a primary school question about spring bolts. "You see, I've only lived in that part of the city for a few months."

"But you must know Mr. Bronson," the salesman insisted upon sticking to his story. "He's president of the State bank, and—"

By this time the prospect was half under the car examining the construction of the muffler. And when the salesman again prepared to refer to the famous Mr. Bronson, the confused motorist was saying:

"You might get in touch with me when you have a sport model to show. That is the only model I would be interested in."

"Then you had better let me have your business address, too—no, I guess that won't be necessary. If you're not at home there will probably be some one around to tell me where I can find you."

"I'd rather you'd get in touch with me at the office. Here's my card."

"Thank you," said the conqueror, reciprocating by handing over his own name

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MOTORIZING AND AVIATION

Continued

plate. When the gentleman had departed the salesman found that he held the business card of a prominent stock broker. Not to have ascertained this information would have meant losing the sale to some other, more crafty, salesman.

A particularly hard nut to crack, says the writer, is the man who is looking over the car for a "friend" of his. When the name of the "interested party" is asked for, he invariably replies that he feels that the "friend" would prefer not having it divulged. "He is a little fussy about having automobile men chasing after him," explains the emissary. "You know how it is." Of course:

The salesman "knows." The big question is how to obtain information regarding this party who has obviously come in for the sole purpose of shopping unhampered by customary annoyances. One salesman surmounted this obstacle by insisting upon driving the gentleman home when he had finished looking over the car. It happened to be around closing time, and the salesman pretended that he lived out in the same part of the city. By this ruse he obtained the address of the gentleman; and later, through a visit to the house, his name. Also he worked in a demonstration which, incidentally, served to sell the car.

This same salesman has learned through experience to be ready at all times for the resourceful prospect, who is not to be outwitted by the mere acceptance of a free ride home. Upon one occasion such a party alighted before an apartment house, which immediately precluded the possibility of finding out the man's name by a later visit to the address. The salesman has learned to circumvent this difficulty by suggesting that the wife take a look at the car, or, if this fails, by pretending to have another prospect in the same building.

The party who frankly admits he is "just looking" and isn't thinking of buying is usually the very one who will be writing a check for a new car in very short order—and the salesman must make haste to get him at least on the mailing list. To obtain this information, however, requires considerable tact, for, having so frankly admitted that he isn't in the market, there seems to be little point in asking for his name and address. But there's a way to manage this, too. The salesman gets out a memorandum book and announces that the factory is preparing a special booklet concerning the car, and that the agency is sending it to a special list of interested parties who would be likely to appreciate its value and not relegate it to the wastepaper basket.

"May we send you one?" asks the salesman, all set with his pen to write down the magic words.

There is no sensible reason to refuse, and the desired information is immediately forthcoming. Any one of the company's complete catalogs will answer the purpose of making good the salesman's ruse and of holding the prospect's interest.

If any car shopper thinks he is putting anything over on the modern vendor of sparkling motor cars, he is mentally still in the days of hand-cranked and linen dusters. There are more ways than one of skinning a cat, and the energetic salesman proves it.

SCIENCE AND INVENTION

Continued

RUNNING CARS ON MOLASSES

WASTE sugar-cane products should be turned into alcohol on the plantation, and motor fuel manufactured therefrom, according to Dr. Henry Arnstein, a consulting chemist of Philadelphia, who writes on "The Utilization of Molasses in the Manufacture of Motor Fuel" in *The Louisiana Planter and Sugar Manufacturer* (New Orleans). Pure alcohol is not available for use in motors, according to Dr. Arnstein; but properly combined with other fuels, especially with such as will overcome the reluctance of alcohol to ignite, in starting the engine, it is in most respects superior to gasoline and is likely to supplant it. Ether, the best substance to mix with it, is easily manufactured, and the planter can produce the motor fuel ready for use, on his own ground. Dr. Arnstein points out that losses from fire in the cane-fields are at present great, and that the partly burned cane can be utilized for the production of alcohol provided there is a distillery on the plantation. He writes:

Long ago it had been recognized that alcohol must be reckoned with as the efficient fuel of the future. Its successful use was retarded by its comparatively high price, but conditions changed and as gasoline became more scarce, its price continually rose, until to-day it is practically beyond reason. In the meantime, however, the production of alcohol has obtained such high standard and the yield obtained increased to such an extent that in any oil district to-day we are able to produce alcohol for less than half of the price of gasoline of equal volume, and producing alcohol from waste or by-products it can be produced from ten cents per gallon up, depending on the amount of alcohol produced.

Alcohol, however, due to its chemical composition and water content, does not volatilize as easily as gasoline. It can be, however, combined very advantageously with other fuels.

Meiggs says that the present and prospective basic sources of liquid fuel are alcohol, gasoline, benzol and shale spirit. Alcohol is perfectly miscible with benzol and protects the latter from freezing in winter. Shale spirit has gumming or resinifying tendencies which can be eliminated by the use of alcohol. The lightest grade of gasoline mixes with alcohol, but with the heavier grades, especially with kerosene, separation occurs which can be corrected by the addition of a solvent, such as benzol.

Two thousand tests comparing denatured alcohol with gasoline in stationary engines have been reported in a U. S. Bureau of Mines bulletin. The experimenters, Dr. Arnstein tells us, observed the denatured alcohol more nearly approaches the ideal fuel than does gasoline, for at any compression it shows greater efficiency. Their conclusions follow, in part:

Explosive mixtures of alcohol vapor and air can be compressed to a much greater

Getting Down to "Brass Tacks"



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"Take our electrical equipment. Westinghouse has a reputation at stake, and all their experience and knowledge are put behind our job to make it just the best that can be. And where can you find more experience, or better knowledge of electrical practice. And they have a big idea in the car owner's interest, too, and cover the country with Service Stations for the proper care of their equipment.

"All these are real values in the car a man buys and it is good if he finds out about them before he does so."

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*Names given on request

SCIENCE AND INVENTION

Continued

extent in an engine cylinder without pre-igniting than can an explosive mixture of gasoline vapor and air. For a ten- to fifteen-horse-power four-cycle stationary engine a compression pressure of seventy pounds per square inch was found to be the maximum that could be used for gasoline engines and a hundred and eighty pounds for alcohol mixtures. This maximum pressure in either case is the most advantageous from the standpoint of fuel economy.

The general alcohol engine is or can be so designed or constructed to be equal to the gasoline engine in adaptability to service. A gasoline engine with a compression pressure of seventy pounds but otherwise well suited to the economical use of alcohol will have 10 per cent. larger available horse-power when using alcohol than when using gasoline. When fuels are used in engines best suited for the purpose, the maximum available horse-power of an alcohol engine working at the pressure of one hundred and eighty pounds is 30 per cent. greater than a gasoline engine working at seventy pounds pressure, having the same cylinder diameter, stroke and speed.

Alcohol diluted with water in any proportion from denatured alcohol, which contains about 10 per cent. of water, to mixtures containing about as much water as denatured alcohol, can be used in gasoline and alcohol engines if they are properly equipped and adjusted.

The hazard involved in storage and handling is far greater with gasoline than with alcohol, as burning alcohol can be extinguished with water—not so gasoline.

In regard to general cleanliness, such as absence of smoke and disagreeable odors, alcohol has many advantages over gasoline or kerosene as a fuel. The exhaust from an alcohol engine is never clouded with black or grayish smoke as is the exhaust of a gasoline or kerosene engine when the combustion of the fuel is incomplete, and it is seldom, if ever, clouded with a bluish smoke when a cylinder oil of too low a fire test is used or an excessive amount supplied, as is so often the case with a gasoline engine. The odors of denatured alcohol and the exhaust gases from an alcohol engine are also not likely to be as obnoxious as the odor of gasoline and its products of combustion.

Very few alcohol engines are being used in the United States at the present time; and little has been done toward making them as adaptable as gasoline engines to the requirements of the various classes of service. Engines for stationary, marine, and traction service, automobiles, motor trucks, and motor railway cars designed especially to use denatured alcohol have, however, been tried with considerable success.

This report was written in 1911 and 1912 as published by the Bureau of Mines. At that time, alcohol was far more expensive than gasoline. To-day we would guarantee to manufacture alcohol at any place under the sun for very much less than the price of gasoline.

Alcohol can very favorably compare as a fuel with gasoline, being a cleaner and safer fuel which can be manufactured at any place. It is less disagreeable to operate, and poisoning by improper air supply when running the engine in a closed room does not exist, while many fatal accidents have occurred with gasoline engines.



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The Literary Digest

DEPT. 112

354-360 Fourth Ave., New York

It requires less air for complete combustion and as it is able to withstand a greater compression its thermal efficiency is 50 per cent. greater than that of gasoline. The hazard of storing alcohol is less than when storing gasoline, and burning alcohol is extinguishable with water. It has a more staple chemical composition than petrol, which is not a pure chemical compound but a mixture of a large number of compounds and therefore its properties can not be definitely stated as they vary from case to case. While alcohol has only .6 of the calorific power of gasoline it possesses the advantage that one-third of its weight is oxygen and therefore it needs not to be doped or energized as gasoline, which is entirely void of oxygen. The higher temperature of spontaneous ignition of alcohol allows the use of greater compression without pre-ignition than when gasoline is used. Alcohol possesses a higher specific gravity than gasoline, which is a fact favorable to the alcohol when bought by the volume measure. Since alcohol requires less air for its combustion the loss of heat by the exhaust is less.

Alcohol is the only fuel that can be prepared without drawing or exhausting existing natural resources, therefore there is no limit to the amount that can be made available. Alcohol, due to its wider range of explosion, can be efficiently operated even at incomplete combustion due to improperly adjusted carburetors. Mixtures of a solution of naphthalene, alcohol, and kerosene are cheap and a very effective fuel and have been used in large quantities in Germany before and during the war.

The Trade Commissioner of Rio de Janeiro, Brazil, reports that automobiles and launches belonging to the state of Pernambuco are now successfully using alcohol as fuel. All of which conclusively proves that alcohol, in spite of its low vapor pressure which causes the alcohol engine to be started with difficulties after standing idle for a few hours, is a fuel that will find general use in the near future. To overcome the difficulty of starting the alcohol engine, the alcohol had been mixed with benzine, benzol, toluol, and other chemical liquid explosives. The best and most efficient of all of those products is ether.

The process of manufacturing motor fuel is very simple, the etherization equipment is not complicated and can be installed at every distillery at a very small expense on short notice. Therefore, we believe that every distillery will have in the near future such an outfit and sugar manufacturers in general will take steps to utilize their molasses in the manner heretofore described if they intend to put their plants on such remunerative basis as was the case in the past; and the sooner they realize that, the better for their stockholders.

All people interested in sugar know the great damage caused and loss suffered by the many fires occurring in the cane-fields. We are all familiar with the importance of crushing such cane immediately unless very heavy losses in yields will occur, which loss might amount to over 50 per cent. of the original sugar content of the cane when harvesting is delayed over fifteen days. The majority of this loss in sugar could be saved if distilleries were available and in such installations this burnt cane could be utilized to very great advantage to manufacture alcohol or motor fuel, saving the potash at the same time. In other words, cane juice can be directly fermented just as diluted molasses, and one fire in the cane-field will pay for the whole installation of the distillery and motor-fuel plant.



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SCIENCE AND INVENTION Continued

FOODS GETTING PURER

FOOD-ADULTERATION is becoming rare, owing to efficient Government inspection, says John P. Street, of the National Canners' Association, Indianapolis, writing in *Hospital Management*, Chicago. Since the passage of the Federal Food and Drugs Act in 1906 the whole question of food adulteration, he tells us, has undergone a decided change. Whereas formerly the purchaser was more than likely to receive sophisticated foods, often containing ingredients actually dangerous to health, to-day food adulteration in the strict sense has become a matter of academic interest rather than one vitally affecting the health of our people. Certain classes of foods, often compounds, frequently must be classified as illegal because of errors in labeling. Generally speaking, however, most of our food products show a gratifying increase in purity. In future we shall simply have to see that all of our food shall be made from good, sound raw material, and that the manufacture, sale and handling of foods shall be conducted in a sanitary manner. Writes Mr. Street:

A review of the situation in Connecticut covering a period of eighteen years shows that we examined 26,102 samples of food, and that among the simple foods the freedom from adulteration increased from 59 to 90 per cent., while among the compound foods the increase was from 27 to only 34 per cent. However, we already stated, this lack of purity in the compound foods was due chiefly to technical adulteration and reflected on the quality of the product rather than on its healthfulness.

At the present time, therefore, the problem of those who are responsible for the purchase of food in the home or the institution is rarely connected with food adulteration. Unadulterated food, however, is only one phase of the food problem. Perfectly good, nutritious and wholesome food may go to the food manufacturer, and by faulty processes, slovenly methods or insanitary practices be rendered less nutritious and wholesome, or in extreme cases become dangerous to the consumer. On the other hand, food may be prepared commercially with every attention to sound, raw material, proper manufacturing technique, and the best modern sanitary practice; it may leave the factory or packing-house a safe and wholesome food in every particular, and yet be rendered unsafe and unwholesome by careless handling in the institution, or private home where it is consumed. Such a condition is more prevalent among "fresh" foods that go to the consumer in their natural condition, or which undergo no manufacturing process. In fact, foods of this class are, generally speaking, by far a greater source of danger than processed foods, for the latter have usually undergone a cooking process that very greatly increases their margin of safety. The insanitary refrigerator in the home or institution is probably the most common source of food infection, and too much attention can not be given to make and keep it clean and sweet.

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Only men who can earn in excess of \$5,000 annually can qualify. Preference will be given to those men who know *how* by actual experience to train salesmen in selling direct to the consumer. Also, those selected must be trustworthy and possess ability to inspire the confidence of the men and women employed to serve our customers.

For more than thirty years The Literary Digest has been sold by mail to our subscribers. Nearly a million are now buying it in this manner. Our plan provides for a new service to our customers without additional cost to them. And our District Sales Managers can build a permanent and profitable business on the commission basis by the methods we teach them.

To be considered for an appointment, applicant must sell his services by first letter, after which a personal interview may be arranged. Replies should contain a brief but complete record of experiences present and previous earnings; age, and the names of three individuals who will vouch for applicant's character and ability. Mail your letter to Circulation Director,

The Literary Digest

Box 1770

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To Win Friends, Fame, and Fortune

Why are some deserving men left in business? Why are some handsome, well-educated men unpopular in social life? What is the real secret of achieving personal success?

These and hundreds of other pertinent questions on the tip of your tongue are answered by that popular inspirational writer, H. Addington Bruce, in his inspiring and fascinating new book—

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A wonderfully clear-cut analysis, in plain, conversational English, of certain mental actions and reactions, every page radiating encouragement and helpfulness for ambitious men and women.

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"When Knights Were Bold"

If you lingered over the thrilling romances and the other coloratura travel tales told by Sir Frederick Treves, Bart., in "The Riviera of the Corniche Road" and his other books, you surely will enjoy his latest work—just from the press—

The Lake of Geneva

with its quaint and curious personalities—some famous, some quite infamous—and the strange adventures that made history and gossip centuries ago in the picturesque towns clustering close to the Lake. You will learn the interesting story of Bonivard, the prisoner of Chillon, and his wives—quite different from the Bonivard immortalized by Byron about the daring of the pretty and pert Lady Bonne of Crassier, the love story of Mellerie, the legends of Rippallie, the escapades of Madame de Warens who was a wife when fourteen, the tragedy of Beauregard, the startling experience of Marie Almee with angels at Evian, about the Geneva of Calvin, of Voltaire, of Madame de Staël, which the Savoyards tried to steal one night—a story the Genevans still proudly tell to tourists.

Sir Frederick has fully maintained his reputation as a fascinating descriptive writer in this book. 300 pages, besides 76 pages of (100) photographic illustrations. Map supplement.

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The Federal Meat Inspection Act practically assures the consumer that the meat he buys is sound, is free from pathogenic organisms, and is packed in a clean and sanitary packing-house by clean workers, free from infectious or contagious diseases. Government inspected meat is sound and wholesome when it leaves the packing-house, practically without exception, and in the transportation of the meat products from one State to another, the Government still maintains a careful watch that the product on which it has placed its stamp of approval is not allowed to deteriorate during transit due to careless or unintelligent handling. Once in the local market the responsibility for its proper keeping rests on the wholesale and retail dealers, under the supervision of the State or municipal authorities. When the meat is not government inspected, as in the case of local slaughterhouses, inadequate supervision may cause a distinct menace to the health of the consumer. But no matter how much care is exercised by Federal, State or municipal authorities, the responsibility for the proper keeping and final preparation of the meat rests very largely on the ultimate consumer, just as with all other classes of foods.

Many safeguards, likewise, are thrown around the production and sale of milk. Unfortunately, however, raw milk is peculiarly liable to infection and, in spite of official inspection, sickness due to contaminated milk is not infrequent. Here again all the advantage gained by official supervision of the production and handling of the milk may be lost through improper care after it reaches the consumer.

In most of our progressive States, sanitary codes are in operation which in a measure safeguard our food products during the various stages of manufacture and sale. There are so many food manufacturing plants, so many warehouses, so many shops, however, that proper official sanitary control of food establishment is almost impossible because of the cost involved. In this connection it is an interesting sign of the times that certain industries are realizing the importance of a strict sanitary control in their manufacturing processes, due in part to their appreciation of their obligation to the consumer to produce clean products packed by clean people in a clean factory, and in part due to their conviction that any food producer who is not willing to meet such requirements is a detriment to the industry and is entitled to no place in their counsels or in their trade associations. The National Canners' Association already has taken such a stand and it is understood that the baking industry is contemplating a similar system of self-inspection, so that more and more the consumer will be able to buy prepared foods with the assurance that the manufacturer has done everything in his power to render his product safe and wholesome and worthy of confidence.

One to Practise On.—YOUNG WIFE—"The trained nurse is going to teach me how to give the baby its bath."

YOUNG HUSBAND—(anxiously)—"Don't you think we'd better send out and hire another baby?"—*Life*.

Yes, but What?—A Ford car has been found outside the house from which it was stolen a year ago. No doubt there was some good reason for this delay.—*Punch* (London).



Money saved by buying pipe this fall

THE old habit of buying pipe in the spring and summer months is an expensive one—for both the maker and the user of pipe.

This advertisement is published to explain to pipe buyers how they can profit by placing their orders this fall.

First—The very fact that there are fewer buyers in the fall gives those who do buy an advantage.

Second—The cost of producing pipe is lower in the fall and winter than in the spring and summer.

Third—An even volume of production for the pipe manufacturers, summer and winter, will in the long run reduce the cost of pipe the year around.

Fourth—Pipe is more easily delivered on most jobs in cold weather because of the firmer condition of the roads. Even if left out all winter *Cast Iron Pipe* is not in the least injured by exposure.

Fifth—Buy now and you will be assured of prompt deliveries; you will avoid costly delays, disruption of extension plans, laying off of pipe-laying gangs and general dissatisfaction. Buy now and you will have your pipe on the ground when you want it.

And be sure you specify *Cast Iron Pipe*. *Cast Iron Pipe* is the standard pipe for water and gas mains and for many industrial purposes. It will give you service measured by centuries. The first *Cast Iron Pipe* ever laid is still on duty carrying water today, after more than 250 years underground in the Gardens of Versailles, France.

THE CAST IRON PIPE PUBLICITY BUREAU, 165 E. Erie St., Chicago

CAST IRON PIPE



Send 25c today for "Pipe and the Public Welfare," an illustrated, cloth-bound book of value to every person interested in water and gas mains, or pipe for industrial use.



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WHEN a certain business man died, about two years ago, his wife received a considerable sum of insurance money. Knowing little about investments, she consulted her brother. He recommended that she purchase stock in the company of which he was president.

Last year the business went into the hands of a receiver. The widow's income has ceased, and her principal is practically lost.

Such cases as this point the moral that it is often as essential to provide for the future protection of insurance money as it is to pay the premiums.

One of the many important services rendered by trust companies is the care of life insurance. Trust companies are today the trustees for many millions of dollars of insurance money.

Your insurance can be made payable to a trust company as trustee. The company will invest and distribute it according to such instructions as you leave, by which you can provide for many possible contingencies.

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Ask a Trust Company

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TRUST COMPANY DIVISION
AMERICAN BANKERS ASSOCIATION
FIVE NASSAU STREET, NEW YORK

INVESTMENTS ▽ AND ▽ FINANCE

THE AMERICAN FARMER SURPRIZES ENGLAND

THE American farmer is an extremely important individual in the eyes of the world in these days when Europe's agricultural output is still far below normal. A correspondent of *The Economist* (London) has been looking through recent American farm statistics and finds certain facts which are new to him and which the editor of *The Economist* thinks English business men ought to know. The large number of tenant farmers, the amount of unimproved land and the large number of German farmers in our best agricultural States are three facts which seem to have somewhat surprised the English investigator. The first important circumstance he notes is that in this country there are 10,583,000 adult males living by agriculture. "This is of itself impressive." Then, he continues,

We find that there are 4,034,000 laborers, a striking proportion on a land which most of us figure as cultivated by owners of the soil which they till. Of these 4,034,000, however, it is probable that a considerable proportion are sons and nephews of the owners, for the Government classification will be seen to include three classes only—the owners, or yeomen, who number 3,995,000; the tenant farmers, 2,454,000 in number; and "all others." There would be great and real gain to our essential knowledge of the agricultural problem if we could be told, not of the United States only, but of European countries, including our own, how many of those living by the land are relatives of the owners or farmers.

Many Englishmen will probably be surprised to learn that there are now 2,454,000 tenant farmers in the United States; that, in fact, there is in existence a powerful and numerous class preferring, like the typical British farmer, to pay rent and keep his capital as material wherewith to stock and cultivate the farm. Mortgages now subsist on 29 per cent. of United States farms, and so far from the great war profits having been devoted to paying off mortgages, the extent of these was only 27 per cent. in the year before the war.

The American cultivator has still a truly vast task before him. He has taken up 955,000,000 acres, but as yet only 507,000,000 are actually cultivated. Clearly there is an almost indefinite area for expansion. A separate return in a different buff book gives the cultivated area at 82 acres, and the not-yet-improved at 78, on the average American farm of 150 acres. The "not-yet-improved" area appears to be land reduced into possession and individual ownership or tenancy, but not yet regularly tilled or laid down to grass. A good deal of it is uncleared woodland not definitely scheduled as forest.

The creatures of the States are little known outside America, but it may be worth noting that Iowa is the champion State for pigs, horses, beef cattle and poultry, a commanding position, the Texas has the greatest number of farmers (327,000), and is the leading State for

wool; California, however, has the greatest number of sheep (2,500,000), and is also the great honey State. In timber the chief States are Louisiana (pines), Washington (spruce and cedar), Michigan (maple). The returns give Wisconsin as "the champion hemlock State," which sounds strange till we remember that the American hemlock is a soft wood tree and a conifer.

A natural result of English settlers preferring Canada as under the flag is none the less in some respects disconcerting. There are only 27,000 English-born farmers in America to 141,000 Germans, and the three States of Iowa, Wisconsin and Minnesota form a regular German enclave, with 45,000 Germans to 2,800 Englishmen. The State where Englishmen predominate most is Utah: 1,216 English farm there to only 210 Germans; and, oddly enough, the Mormon "missionaries" have special success in persuading young Englishmen to settle in the region of Salt Lake City.

American farming is not increasing the average yield of any crop to the acre.

GERMANY AS A WILFUL INSOLVENT

WHILE the French view-point has all along been that the bankruptcy Germany is heading for is quite voluntary, and that the purpose of it is to defraud her creditors, there has been an apparent belief on the part of British officials that Germany is really hard up. Consequently, observes *The American Banker*, it is interesting to see an English banking house of the standing of Samuel Montague & Co. take the French view-point in a recent review of the foreign exchange situation. *The American Banker* quotes this paragraph from the London banker's statement:

Germany has scored all the way. She started to befool the "auslander" even before the Armistice was signed. In the early part of 1918 she commenced to buy Bank of England notes and United States dollar notes in Holland, Switzerland and Sweden. Bank of England notes to a large amount were bought by these neutral countries, which were able to sell them at astonishing premiums against marks, and since then Germany has exported milliards and milliards of her paper money in exchange for huge amounts of raw materials and other commodities and foreign currencies. Her nationals have the commodities and the foreign currencies; the foreigner has the paper, and at last he is tired of the game. Further, the German Reich has vastly reduced its debt by watering the mark, and the sterling value of the huge amount of Reichsbank notes in circulation (over 205 milliards) has been reduced to £23,500,000, against which the State Bank holds 1,004,858,000 gold marks. These at the present market price are worth £54,000,000—a surplus reserve of £30,000,000—over its note liability.

CURRENT EVENTS

FOREIGN

September 20.—Great Britain and France, with Italy assenting, agree to call a conference of eight Powers to settle immediately the Near East War question. Meanwhile the British Government prepares for an attack by the Kemalist forces.

September 21.—Hamid Bey, the Turkish Nationalist representative in Constantinople, says that Kemalist forces wish to cross the Dardanelles in order to get into Thrace, and is informed by General Harrington, in command of the British forces, that an advance on the Straits would mean a declaration of war. The Dominion delegates to the League of Nations Assembly send a joint telegram to Prime Minister Lloyd George urging submission of the Near East question to the League.

September 22.—An official statement from the British Government declares that the Dardanelles must be neutralized and open for free navigation to all countries of the world, under the League of Nations or some other effective international organization. Great Britain, the statement adds, is seeking nothing for herself.

September 23.—The British, French and Italian Governments agree that the Turks shall have sway over Anatolia and Thrace up to the Maritza River, and possession of Constantinople, with the Straits placed under the guardianship of the League of Nations, and ask for a conference of Turkey, Greece and the Allied Powers to conclude a final treaty of peace. M. Vorovsky, head of the Soviet Delegation in Rome, says Russia will refuse to recognize any treaty concerning the Straits which is concluded without her consent.

September 24.—Turkish cavalry forces cross the neutral zone at Chanak, but retire after a conference between the commanders of the Turkish and British forces. Kemalist officers are reported to be clamoring to be led against Constantinople.

The Majority and the Independent Socialist parties in Germany heal their differences and reunite under the name of the United Social Democratic Party, said to be representative of 11,000,000 workmen.

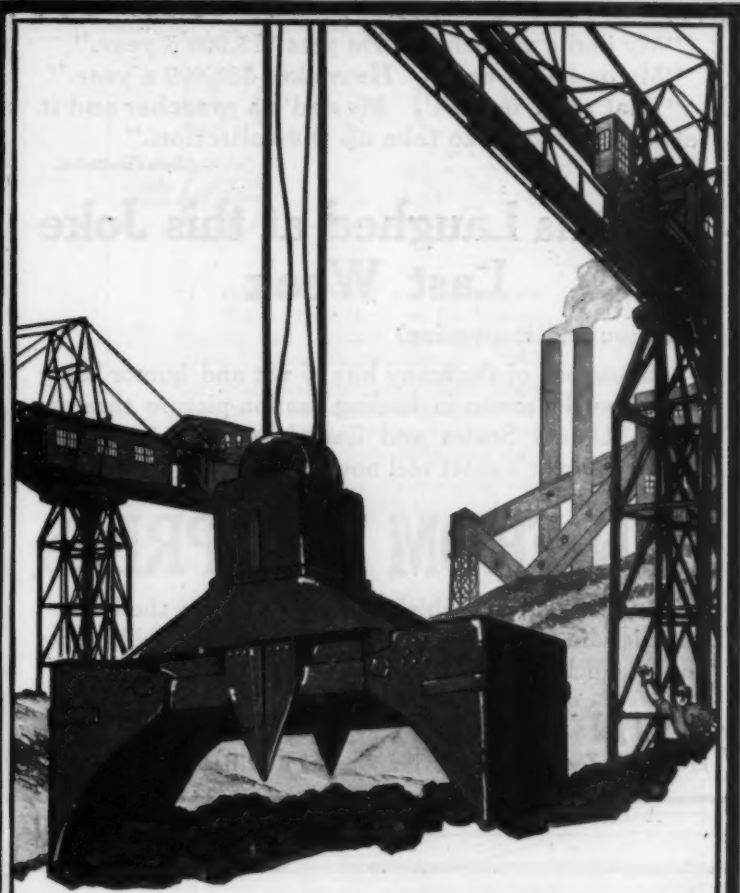
Georges Carpentier, heavyweight champion boxer of Europe, is knocked out by Siki, a Senegalese, in the sixth round of what was to have been a twenty-round bout.

September 25.—Three thousand Turkish cavalymen have occupied Eren Keui, on the southwestern bank of the Dardanelles, about twelve miles from Chanak, says a dispatch from Constantinople.

September 26.—Nine thousand Greek troops at Salonica and sections of the Greek Army in the Aegean Islands and Thrace are reported to have revolted and to have demanded the abdication of King Constantine. The Cabinet resigns and martial law is proclaimed in Greece.

Turkish Nationalists who have occupied the neutral zone around the Dardanelles are ordered by the British High Command to withdraw within forty-eight hours. Both British and Turkish troops are reported to be entrenching in the neutral zone from Chanak to the mouth of the Dardanelles.

The Irish Provisional Government notifies the Dail Eireann that it has



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Yellow Strand Wire Rope—steel strong—is a fitting working companion for those mammoth steel jaws that handle tons of coal, sand, ore or earth with such facility and such apparent ease.

In Yellow Strand, steel jaws find the certain strength they need for heavy lifting, the elasticity they need for withstanding the shocks of power suddenly applied, the suppleness they need for bending over sheaves, sometimes smaller than rope of such great strength might be expected to work on satisfactorily.

For Safety, carry a Basline Autowline in your car and secure your spare tires with Powersteel Autowlock. Both are made of Yellow Strand.

The strand of yellow is our guarantee of uniform quality and your protection. Write "Yellow Strand" into your wire rope requisitions.

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Yellow Strand WIRE ROPE

F-351.

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 "My dad's an actor. He makes \$50,000 a year."
 "That ain't nothin'. My dad's a preacher and it takes twelve men to take up the collection."

—*Atlanta Constitution.*

Millions Laughed at this Joke Last Week

Do you find it amusing?

It's just one of the many bits of wit and humor being flashed on the screen in leading motion-picture theaters in the United States and Canada now showing *The Literary Digest's* short reel novelty,

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Go to the Theater which shows "Fun from the Press," for it is safe to say that the entire program will please you as much as "Fun from the Press" will amuse you.

FUN FROM THE PRESS

Produced by *The Literary Digest* Distributed by *W. W. Hodkinson Corporation*

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Miss Stella Williams of Union City, Tenn., is a Special Representative of *The Literary Digest*. Her ability to meet and talk to people, plus her irresistible smile helps her to earn money and make many friends.

Her story is a brilliant commentary on the girl of today. She has acquired a college education, supplemented with post-graduate courses at Columbia and Chicago Universities, through her spare-time earnings. For part-time work Miss Williams has earned liberal commissions this month, and has already earned a salary check as well at the time of writing this advertisement.

We are ready to assist any capable, energetic young woman in earning the money to pay for her education. The work is pleasant and dignified. No experience or investment is necessary.

On the appended coupon write **TODAY** for full details of our spare-time offer to Special Representatives.



THE LITERARY DIGEST
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Please tell me how I too can earn money to help pay for my education.

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CURRENT EVENTS

Continued

decided to erect a military tribunal to deal with armed opposition to the Free State.

Great Britain informs the Council of the League of Nations that she is ready to guarantee her share of 20 per cent. of the Austrian loan of 520,000,000 gold crowns.

The French Foreign Office announces that French officials on the scene found nothing showing Turkish responsibility for the Smyrna fire and that it possesses damaging testimony of misdeeds on the part of the Greek Army.

The French Government refuses to ratify the Belgian-German agreement whereby the Reich tenders \$67,500,000 in treasury bonds in lieu of cash to satisfy the remainder of the 1922 cash reparations payments. Belgium had accepted the bonds.

DOMESTIC

September 20.—The Senate sustains the President's veto of the soldiers' bonus bill by a vote of 28 to 44, a two-thirds vote being needed to overcome the veto. The House voted 258 to 54 to override the veto.

September 21.—President Harding signs the Fordney-McCumber Tariff Bill, and the new law goes into effect September 22.

Judge James H. Wilkerson, of the United States District Court in Chicago, extends the temporary restraining order in the Railway Shopmen's strike for two days to give more time to hear argument.

Henry Ford orders all his industries, to reopen at midnight, following a movement of large supplies of coal to Detroit. The Ford plants have been closed five days.

September 22.—Congress adjourns.

President Harding calls upon all the railroads to hold a "concentrated drive" for thirty days to provide greater transportation facilities for coal.

September 23.—Federal Judge James H. Wilkerson, of Chicago, grants a preliminary injunction, with nationwide effect, restraining officials of the Federated Railway Shop Crafts from doing anything to obstruct interstate commerce.

The Special Grand Jury investigating the Herrin mine murders of June 22 makes its final report and returns a total of 214 indictments for murder, for attempt to commit murder, or for lesser offenses. The authorities are charged with failure to protect life and property, and the mine owners are criticized for risking the danger of reopening the mines.

Six Army men are killed when a bombing plane used in the war games at Mineola, L. I., crashes to earth.

September 26.—The Cabinet cautions the Prohibition Navy that it must not stop and search ships beyond the three-mile limit established by international law.

Secretary of State Hughes announces that the American Government is gratified at the Allies' proposal to secure the liberty of the Dardanelles, the Sea of Marmora and the Bosphorus, as well as protection of racial and religious minorities.

Senator Thomas E. Watson, of Georgia, dies suddenly in Washington in his sixty-seventh year.

THE LEXICOGRAPHER'S EASY CHAIR

To decide questions concerning the correct use of words for this column, the Funk & Wagnalls New Standard Dictionary is consulted as arbiter.

Readers will please bear in mind that no notice will be taken of anonymous communications.

"E. G. N., Chicago, Ill.—"Can you tell me briefly what principles govern the choice of spelling between *strup* and *syrup*, *gypsy* and *gipsy*, *brier* and *brir*, and *bur* and *burr*? Also, is there any principle involved in the insertion or omission of the hyphen in such words as *to-day* and *to-morrow*?"

The etymologically correct spelling of the word *strup* is *strup*, from the Old French *strup*, Middle Low German *strup*, Middle High German *strup*, German, Swedish, and Danish *strup*. But this is the history of English usage as represented by citations from English works: Trevisa, 1398 [Manuscript, Bodleian Library, Oxford], used *suyripes*. The same, one hundred and fifty pages further on, *strup*. Lanfranc, 1400, *strup*, from which date we take our form, the earliest established form in English that harmonizes with the language from which we drew the word, that is, the French. The word itself was derived by the French from the Arabic *sharab*. The spelling *syrup* is the common English spelling, while *strup* is the American spelling free from English influence.

As for *brier*, we derive the term from the Anglo-Saxon *brer*. The Old English and Middle English spelling was *brere*. The form *brier* is a comparatively modern form dating from the 16th century. Robert of Gloucester, 1297, used *brer*; Chaucer, 1386, *breres*; Trevisa, 1398, *breer*; Spenser, 1595, *brere*, the spelling favored by Tennyson; see his Poems, edition of 1830. Notwithstanding the foregoing, the form *brier* dates from 1545—Brinklow's "Lamentations," 92; "Do briers bring forth figs?" This form was found also in Spenser's "Shepherd's Calendar," 1597; in the Bible, 1611; Watts' "Songs," 1720; Adam Smith's "Wealth of Nations," 1776; Byron, 1822; Tennyson, 1847. The form *brier* is found in Shakespeare's "All's Well that Ends Well," and was used by Addison, Southey, and Dean Stanley. The word, originally a monosyllable in speech, has under the influence of the poets been made two syllables, and the dissyllabic pronunciation is supported by the form *brir-ar*. The Anglo-Saxon *brer* is monosyllabic. The Chaucerian spelling *breres* is a plural form.

With reference to *bur*, this was originally spelled *burre*. This Middle English form is allied to the Scandinavian *borre*; French *bourre*, originally spelled in English *dur*, but also this earlier form dates from 1330, a simpler form, *bur*, introduced about 1600, has prevailed. In Shakespeare's time both forms were in use. We find *bur* in his "As You Like It" (dated 1600), act 1, scene 3, but *burre* in his "Measure for Measure" (dated 1603), act 1, scene 3. Milton favored *bur* (1634); see his "Comus," line 330. The only explanation that we can give for the deviation from the early form is that the genius of the language is responsible for the shorter form. Some one may very justly have noted that as *bur* was cut down to *bur*, there was no reason why *burre* should not be cut down to *bur*, and promptly adopted the form, but who and when, history telleth not.

As to the word *gipsy*, this is derived from Egyptian, of which an aphetic form, that is, a form in which a vowel at the beginning of a word is gradually lost or dropped, is *gipsyan*. The form *gipsy*, plural *gipsies*, dates from 1640. This is preferred by the NEW STANDARD DICTIONARY, and owes its recognition to the fact that in the quotations collected for this book the prevalent spelling was found to be *gipsy*. Examining the historical data, we find *gipsy* in use as long ago as 1537 in Ellis's "Collection of Lord Cromwell's Original Letters." Shakespeare in "As You Like It" (1600), act 5, scene 3, uses *gipsies*; Shirley, 1632, *gipsie*; Milton, 1642, *gipsy*, and Addison, 1711, *gipsies*. The alternative form *gypsy*, also found, is rare.

With reference to the forms *to-day* and *to-morrow*, these words were originally written without any hyphens as two separate words, and so occur in Wyclif's translation of the Bible (Luke, chapter 13, verse 32) made in 1382. Coverdale in 1535 brought about confusion by writing "*to-day or tomorrow*," but in a collection of the minor poets from the Vernon Manuscripts the form "*here to-day a way to-morn*" has been found by Dr. Murray. This dates from 1300. Ælfric in his "Homilies," which date from the year 1000, used the hyphen. Shakespeare five hundred years later wrote "*to-day and tomorrow*." The dictionaries of *to-day* all indicate the hyphen in these words, and the fact that there is unanimous agreement indicates clearly that the preponderance of usage is in favor of the retention of the hyphen.

The word *to-day* is explained as meaning "this day." It is compounded of *to*, preposition, and *day*, noun. *To* here has the signification of "for," an old sense, so that *to-day* means "for the day"; *to-night*, "for the night."

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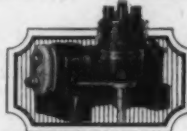
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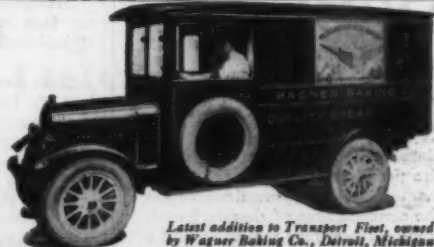
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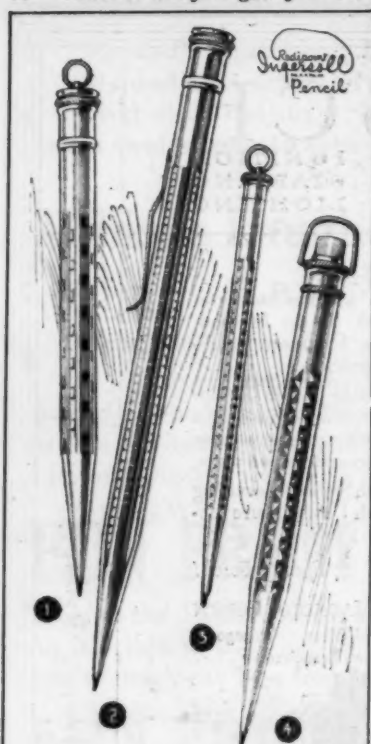
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THE ▽ SPICE ▽ OF ▽ LIFE

Gentle Hint.—"You are a singular sort of girl!"
"Well, that's easily altered."—*Melbourne Punch.*

Concealing Something.—"Paw, why does Santa Claus wear a beard?"
"Because he has so many Christmas neckties, son."—*Boston Beanpot.*

The Difference.—"In French, *pays* means country," announces a well-informed contemporary. In German, the word has no meaning.—*London Opinion.*

Something Safe.—"I wish I had a baby brother to wheel in my go-cart, mamma," said small Elsie. "My dolls are always getting broken when it tips over."—*Boston Transcript.*

Keeping Busy.—MISTRESS—(to butler) "Why is it, John, every time I come home I find you sleeping?"
BUTLER—"Well, ma'am, it's this way. I don't like to be doing nothing."—*Le Rire.*

Doing His Best.—"They say people with opposite characteristics make the happiest marriages."
"Yes; that's why I'm looking for a girl with money."—*Western Christian Advocate (Cincinnati).*

He Knew What He Wanted.—SPORTSMAN—"I want to look at some mirrors."
STOREKEEPER—"Hand mirrors?"
SPORTSMAN—"No, some that I can see my face in."—*Western Christian Advocate (Cincinnati).*

Not Even Hyphenated.—A bootblack in City Hall Park is a sociable chap, and conversation is inevitable.

"You are a foreigner?" he was asked.
"Not foreigner," he answered. "American from de other side."—*New York Evening Post.*

One Advantage.—"Which is the way to Ottawa, my lad?"

"I—I don't know."
"Which is the way to Topeka, then?"
"I—I don't know."
"Well, can you tell me how to get back to Wichita, then?"

"I—I—I don't know."
By this time the drummer was quite impatient and said to the boy: "Say, you don't know very much, do you?" to which the lad retorted:
"No! But—I ain't lost!"—*Judge.*

To Tell a Patella.—The little daughter of a Chicago public school principal is now a pupil at the experimental school at the University, where she learns some things not taught in the regular city schools. One day her father found her crying. "What's the matter, Noreen?" he asked. "I fell and bumped my patella," she replied. (Remember, this was in Chicago, and not in Boston.) Father was sympathetic. "Poor little girl," he said, and proceeded, with the best intentions, to examine her elbow. Noreen broke away. "Huh!" she snorted. "I said my patella! That isn't my elbow. My elbow is my great sesamoid." Father went for a dictionary.—*The Christian Register.*

Color No Object.—WANTED—Girl for light housework, no washing, no objection to green or colored girl.—*Classified Ad. in the Hartford Times.*

Canned Tongue.—"Do you know why we call our language the Mother Tongue?"
"Because Father never gets a chance to use it."—*Söndags Nisse (Stockholm).*

Fair Warning.—Massachusetts authorities are urging the public not to waste coal. The public should also be careful not to waste its diamonds and platinum watches.—*Minneapolis Journal.*

Theological Problem.—"Mother, s'posin' I died, should I go to heaven?"
"Yes, dear."

"S'posin' I died because a big bear swallowed me, would he have to go too?"
—*Punch (London).*

A Fate Deserved.—"Sir, your daughter has promised to become my wife."

"Well, don't come to me for sympathy; you might know something would happen to you, hanging around here five nights a week."—*Honeycomb Briefs.*

No Chickens.—In speaking of the ultra-modern young woman it is no longer up-to-date to use the term "flapper." They are now called "Easter eggs," because they are hand-painted on the outside, and hard-boiled on the inside!—*Reformed Church Messenger.*

Words and Music.—Terence O'Flannigan had been hired to assist the station-master. As the train arrived he called out, "Change here for Limerickgalwayand-mayo!"

The station-master went for him. "Haven't I told you," he cried, "to sing out the stations clearly and distinctly? Remember now—sing 'em out."

"I will sir," said Terence. And when the next train came in, the passengers were very much astonished to hear him sing:

"Sweet dreamland faces
Passing to and fro;
Change here for Limerick,
Galway and Mayo."
—*Pittsburgh Christian Advocate.*

The Economist.—Recently Harry Brooks overstayed his last car at a lodge meeting. As he came out of the building, he took up a position in front of the house of the local doctor and gazed upward at the darkened windows. Next he pulled himself together and then pulled at the doctor's bell, nearly tearing it out by the roots.

"Doctor, doctor, come quickly!" he cried. "It's a bad case over at Shillington. Don't delay."

The doctor came bustling down-stairs and hustled his car out of the garage. In three minutes they were off, Harry sitting by the doctor.

"That's the house—that one," said the passenger at last, at the end of a spanking drive of at least five miles. "But what's your fee, doctor?"

"Oh, five dollars, for an ordinary night visit," was the reply.

"Then here you are. There wasn't anyone in the place who would bring me for less than seven-fifty."—*Store Booster.*

Oldsmobile

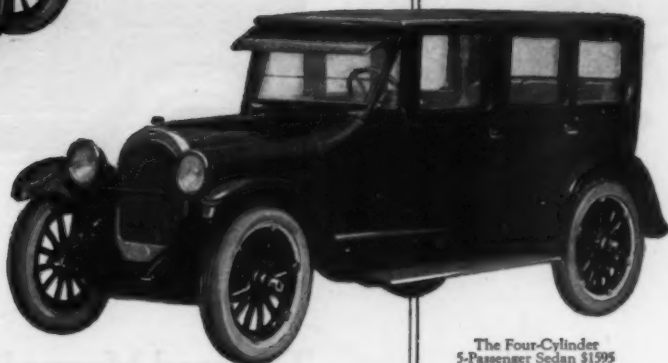
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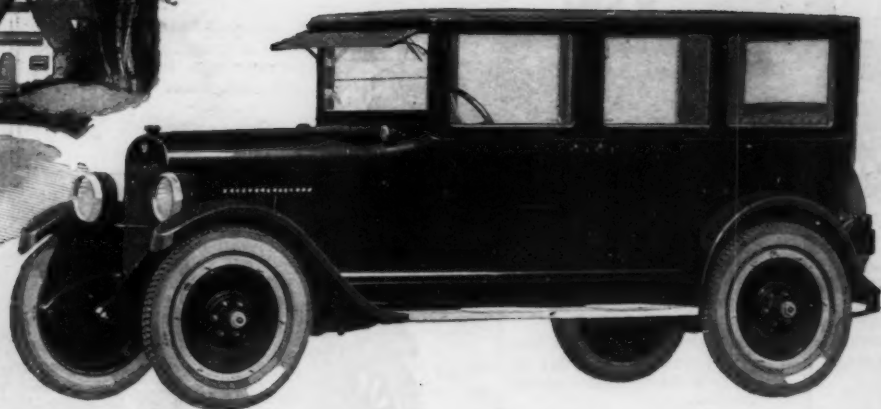
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